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STANDARDIZATION ACTIVITIES



U.S. DEPARTMENT OF COMMERCE

NATIONAL BUREAU OF STANDARDS

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DIRECTORY OF UNITED STATES STANDARDIZATION ACTIVITIES

Joan E. Hartman

Institute for Applied Technology
National Bureau of Standards
Washington, D.C.



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Foreword

The 486 American organizations listed in this directory consider standardization to be a major or important part of their work. Their efforts in developing and disseminating standards of practice directly contribute to the success of our nation's standardization programs. This volume describes their activities in the fields, products, and services in which they specialize.

The National Bureau of Standards assists these organizations under Congressional authorization which directs "cooperation with other Government Agencies and with private organizations in the establishment of standard practices, incorporated in codes and specifications." Special needs of standardizing groups are met through additional Bureau functions which include provision of new and better standards for measurement, determination of physical constants and properties of materials, and development of methods for testing.

This Directory is designed to serve the needs of those interested or engaged in national standardization activities. It should be of particular value to manufacturers, engineers, purchasing agents, and writers of standards and specifications.

A. V. ASTIN, DIRECTOR.

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Directory of United States Standardization Activities

Joan E. Hartman

1. Introduction

The development of standards is an activity on which the nation's economy depends. To industry standardization provides dollar savings through mass production, production of uniform goods, and reduction of time and materials through standard designs, equipment, procedures, and testing. To the purchasing agent standards offer increased efficiency by freeing him from the need of preparing individual sketches, descriptions, and specifications for each purchase. The distributor benefits from having to stock fewer varieties and sizes of commodities and from simplified inventories. Every branch of industry and commerce recognizes that standards promote fair trade by providing a common language between buyer and seller and a basis for evaluating competitive vendors.

The success of our nation's standardization program is due largely to the support given it by our national technical and trade associations. These groups are able to speak for entire industries and to bring the requirements of the consumer into consonance with current engineering and manufacturing practices. Some organizations work toward establishing standards, while others develop test methods or certification and labeling plans to guarantee that products meet the specified standards.

The Federal Government, a vast business enterprise in itself, is also a major contributor to national standardization. Although its fifty-thousand-odd standards and specifications for Government purchasing are mandatory only upon itself, they frequently are adopted or adapted for private industry use. In this way, the Government indirectly provides research and leadership in creating standards and developing methods for measurement and testing. In addition, the Government's Product Standards program provides voluntary standards prepared in cooperation with manufacturers, distributors and consumers of commonly manufactured products. These standards, accepted as trade customs, are established as a service to business and for public use.

Standardization is a major force in our nation's economy because it pays off in greater profits, increased production, higher quality of goods, and customer good will. Standardization will

continue its important assistance in the development of the new technologies of automation, transportation, communications, and space exploration. For the world, standardization holds the key to the exchange of goods and services in international trade. For the common man, standardization supports his belief in our nation's system of free enterprise, and gives him lower prices and a higher standard of living than he would otherwise have.

2. Nongovernment Standardizing Agencies

**ABRASIVE GRAIN ASSOCIATION, Thomas Associates, Managers,
2130 Keith Building, Cleveland, Ohio 44115**

Standardization and simplification activities of this Association are carried on by its Research and Standards Committee. One phase of the Committee's work has been the development of Commercial Standard CS271-65, Grading of Abrasive Grain for Grinding Wheels, which was developed under the auspices of, and published by the Office of Commodity Standards (now Product Standards Section), National Bureau of Standards, U. S. Department of Commerce. The Research and Standards Committee has developed standard procedures for the measurement of capillarity of abrasive grain, a test for determining the bulk density of abrasive grain, procedure for sampling of abrasive grains, and a ball mill test for friability of abrasive grain. The current activities of this Committee are directed toward more uniform application of the Commercial Standard and USA Standards throughout the industry and the development of additional recommended test procedures for the measurement of physical properties of the material.

**ACOUSTICAL SOCIETY OF AMERICA, Wallace Waterfall,
Secretary, 335 East 45th Street, New York, N. Y. 10017**

Since 1932, this Society has sponsored sectional committees of the United States of America Standards Institute for the purpose of preparing standards in the broad field of acoustics. The first of these was Sectional Committee Z24, Acoustics, which was replaced in 1957 by the three more specialized Sectional Committees S1, S2, and S3. These four sectional committees have produced over three dozen USA Standards, not including standards that have been made obsolete by revision. The Society is sole sponsor of S1 and S3, and administrative sponsor of S2 with the American Society of Mechanical Engineers as cosponsor. The scopes of these Sectional Committees may be described as follows: (a) S1 Acoustics—standards, specifications, methods of measurement and test, and terminology, in the fields of physical acoustics, including architectural acoustics, electroacoustics, sonics and ultrasonics, and underwater sound, but excluding those aspects which pertain to safety, tolerance, and comfort; (b) S2 Mechanical Shock and Vibration—standards, specifications, methods of measurement and test, and terminology in the fields of mechanical shock and vibration, but excluding those aspects which pertain to biological safety, tolerance, and comfort; and (c) S3 Bioacoustics—standards, specifications, methods of measurement and test, and terminology, in the fields of psychological and physiological acoustics, including aspects of general acoustics which pertain to biological safety, tolerance, and comfort.

Sectional Committees S1, S2, and S3, through appropriately organized subcommittees, serve as the Advisory groups to USASI and the USNC for participation in the work of ISO/TC43 Acoustics, ICO/TC108 Mechanical Vibration and Shock, and IEC/TC29 Electroacoustics.

ADHESIVE AND SEALANT COUNCIL, Robert M. Stansel,
Executive Secretary, 159 North Dearborn Street, Chicago, Illinois
60601

The purpose and object of the Council is to promote, encourage, and advance the uses of products of the industry. In the field of specification writing and endorsement, the Council achieves this purpose through its Technical Committee. This committee is charged with the establishment of practical and realistic product performance and end use standards for adhesives and sealants sold primarily for resale to users who lack testing facilities and who do not purchase to specifications, but are desirous of procuring to a consistent and known quality standard.

To date, the Council has published the following standards and specifications: AC-A-6201 Adhesive-Nail-on Application of Gypsum Wallboard; AC-S-6202 Polysulfide-Base Sealing Compounds for the Building Trade; and AC-A-6203A Organic Adhesives for Installation of Ceramic Tile in Interior Wet Areas Requiring Prolonged Water Resistance.

The following standards and specifications are presently under development: Revision and upgrading of the Council Specification AC-A-6203A Organic Adhesives for Installation of Ceramic Tile in Interior Wet Areas Requiring Prolonged Water Resistance; development of specifications for contact bond adhesives; and development of quality control procedures related to Council Specification AC-S-6202 Polysulfide-Base Sealing Compounds for the Building Trade.

ADMINISTRATIVE MANAGEMENT SOCIETY, W. H. Latham,
Administrator, Technical and Program Service, Maryland Road,
Willow Grove, Pennsylvania 19090

This Society supports the Standards activity by representation on United States of America Standards Institute Committees X3 for Data Processing, X4 for Office Machines, and X5 for Furniture. This Society has a permanent representative on the Sectional Committee of each of these activities and members who serve as representatives of the general interest group on all of the subcommittees organized under each of these activities. This Society, together with the General Services Administration, are the sponsors of the X5 project.

AEROSPACE INDUSTRIES ASSOCIATION, C. R. Lowry, Director,
Aerospace Technical Council, 1725 DeSales Street, N.W., Washington, D. C. 20036

The National Aerospace Standards are a series of industry-developed standards covering aerospace hardware such as fasteners, fittings, and electrical items, and specifications for aerospace materials, packaging materials, machine tools, aircraft equipment items, and test procedures. More than 1100 standards have been published in the NAS series.

The National Aerospace Standards Committee is the group assigned the responsibility by the Aerospace Technical Council for

the development, maintenance, and promotion of the National Aerospace Standards. The NASC is comprised of management-level engineers responsible for the standardization activities in their own companies. The standardization activities of the Committee are predicated on a base policy of effectively fulfilling industry requirements without duplication of Government agency or other industrial programs.

A close working alliance exists between the Department of Defense, National Aeronautics and Space Administration, and other Government agencies and the NASC in order to insure that the standards of both groups are not duplicative and will meet, as far as possible, all the necessary requirements of Government and industry. This liaison involves the direct participation of agency representatives in the meetings and activities of the NASC. Similarly, the NASC reviews and makes recommendations on Government parts documentation. National Aerospace Standards are generally accepted for use by participating Government agencies in lieu of developing new Government standards.

The Committee carries out its work through the assignment of individual projects to member companies who act as sponsors. The projects may require the development of a new standard, revision of an existing one, or a compilation of comments and recommendations on a Government document. The sponsor's responsibility starts with the initiation of the standard, extends through the coordination of the proposed document with the Committee and with representatives of interested agencies, includes the resolution of comments and recommendations, and finally concludes when the standard has been issued or, in the case of Government documents, when resolution of the submitted recommendations has been achieved.

The NAS series is used to document standards and specifications occasionally developed by other committees of the Aerospace Technical Council and the Association in the areas of electronics, propulsion, quality control, and manufacturing equipment.

AGRICULTURAL AMMONIA INSTITUTE, Z. H. Beers, Executive Vice President, 703 DuPont Building, 22 South Second Street, Memphis, Tennessee 38103

The Institute has developed Standard M-1, "Standards for the Storage and Handling of Anhydrous Ammonia," which covers Basic Rules, Cylinder Systems, Systems Utilizing Containers Other Than ICC Cylinders, Systems Mounted on Tank Trucks, Semi-trailers and Trailers for Transportation of Ammonia, Systems Mounted on Farm Vehicles (Implements of Husbandry) for the Transportation of Ammonia, Systems Mounted on Farm Vehicles (Implements of Husbandry) for the Application of Ammonia, and Refrigerated Storage; Standard M-5, "Specification for Anhydrous Ammonia Hose," developed in cooperation with the Rubber Manufacturers Association, covers Scope, Sizes and Tolerances, Construction, Physical Tests, Types of Tests, Method of Sampling, Methods of Testing, Retests and Rejections, Hose Assemblies, Marking, and Packaging; Standard M-6 is a "Recommended Standard for Agricultural Grade (Inhibited) Anhydrous Ammonia."

AIR-CONDITIONING AND REFRIGERATION INSTITUTE,
L. N. Hunter, Managing Director, 1815 North Fort Myer Drive,
Arlington, Virginia 22209

This Institute is a manufacturers' trade association that is recognized as representing the entire air-conditioning and refrigeration industry. The Institute was formed in May 1953, by the merging of the Refrigeration Equipment Manufacturers Association (REMA) and the Air Conditioning and Refrigeration Machinery Association (ACRMA). In 1965 its scope was further enlarged when manufacturer members of the National Warm Air Heating and Air Conditioning Association voted to transfer their memberships to ARI. The standardization activities of ARI fall into the following general classifications:

Equipment Standards—Standards pertaining to the physical characteristics of items and equipment.

Testing Standards—Standards containing instruction for testing a piece of equipment in order to determine its performance characteristics.

Rating Standards—Standards which contain provisions for converting data into general statements of capacity and performance which can be applied to a series of production items.

Application Standards—Standards which describe and specify acceptable installation criteria, including the initial selection of the equipment.

Safety Standards—Standards which contain provisions intended to safeguard life, health, and property.

At the present time, ARI has issued standards covering the following types of equipment and components: Unitary Air-Conditioning Equipment, Unitary Heat Pump Equipment, Air-Cooling and Air-Heating Coils, Forced-Circulation, Free-Delivery Air-Coolers for Refrigeration, Remote-Type Air-Handling Units, Room Air-Induction Units, Refrigerant Condensers, Refrigerant-Cooled Liquid Coolers, Liquid Receivers, Ammonia Compressors and Compressor Units, Open Type and Sealed Refrigerant Compressors and Condensing Units, Centrifugal Liquid-Chilling Packages, Reciprocating Chilling Packages, Water-Chilling Packages, Liquid Line Driers, Refrigeration Flare Fittings, Self-Contained Mechanically-Refrigerated Drinking Water Coolers, and Transport Refrigeration Units.

In addition to equipment standards, ARI has published a number of application standards, including cooling load estimate forms for various applications, and a standard for application, installation and servicing of unitary air-conditioning systems. ARI also participates with other industry associations in an equipment standard for Room Fan-Coil Air-Conditioners, and has issued three technical books covering properties of refrigerants, equipment corrosion, and refrigerant piping.

ARI also administers certification programs for certain types of equipment, and these programs involve the use of an ARI seal of approval of equipment manufactured and rated in accordance with the applicable ARI standards.

AIR DIFFUSION COUNCIL, 435 North Michigan Avenue, Chicago, Illinois 60611

This is a trade association formed in 1961, whose members are manufacturers of grilles, registers, ceiling diffusers, and high velocity terminal control devices used in conjunction with air conditioning systems in commercial construction. Three test codes have been developed through ADC action.

The major standardization activity of the Council has been the promulgation of a code to standardize the testing and rating of products manufactured by the industry to establish a basis of performance characteristics. Under the provisions of this Code, ADC Equipment Test Code 1062 R, testing is performed in company laboratories which have been previously certified as meeting minimum industry standards in compliance with the Code. The test data thus developed, utilizing the test procedures established by the Code, may be submitted to the Council for certification under the Code.

A second Code developed by the Council for the purpose of testing sound transmission through air conditioning plenum systems is entitled, "Measurement of Room-to-Room Sound Transmission (AD-63)." This Code establishes test procedures for the testing of sound transmission through plenum systems by the two room method.

A third Code standardizes testing procedures for the testing of heat rejecting characteristics in troffer light fixtures.

AIR DISTRIBUTION INSTITUTE, S. M. Van Kirk, General Manager, 22 West Monroe Street, Chicago, Illinois 60603

The standardization and simplification activities of this Association are carried on by the Simplification and Standardization Committee. The work of this Committee has been confined to simplification matters. It initiated and has continued a program of simplification for sizes of pipes, ducts, and fittings for warm-air heating and air-conditioning systems. This work has resulted in the establishment of Simplified Practice Recommendation R207-60 which is published by the Product Standards Section, National Bureau of Standards, U. S. Department of Commerce.

AIR FILTER INSTITUTE, Arthur Nutting, Secretary, Box 85 Station E, Louisville, Kentucky 40208

This Institute is a trade association composed of manufacturers of air cleaning devices usually employed to remove particulate materials (including smoke and fume) from air and other gases. Air filters have a large and varied field of application, some of the most important uses being in air-conditioning or ventilation of buildings, maintaining cleanliness in chemical, biological, and certain mechanical processes, protection of electrical equipment and internal combustion engines, and the cleaning of air to meet "clean room" standards.

The Institute has developed and adopted two standardized test procedures which cover all filters used in these applications except for the "clean room" which has its own D.O.P. test procedures. The AFI test procedures are: (1) Section I Unit or Panel Type Devices; and (2) AFI Dust Spot Test Code.

The first procedure is commonly used for testing "dry type" or "viscous impingement filters" whose performance is suitable for expressing in terms of percentage by weight retained of a standardized artificial dust. The cleaning ability of such filters is generally low to good, and care must therefore be taken in their application.

The second, or Dust Spot procedure, is commonly used for testing filters having good to excellent air cleaning abilities—able, for instance, to eliminate at least 50 percent of the smoke (or similar size particles) in the ambient atmosphere.

These procedures have become standard in this country and are widely used throughout the world.

AIR MOVING AND CONDITIONING ASSOCIATION, Edward A. Cruse, Executive Vice-President, 205 West Touhy Avenue, Park Ridge, Illinois 60068

This Association was formed in 1955 by a merger of several organizations, including the National Association of Fan Manufacturers, the Power Fan Manufacturers' Association and the Industrial Unit Heater Association. Its membership comprises some seventy companies in the U. S. and Canada which manufacture air moving and conditioning devices.

The main technical effort of the Association is aimed at the development of accurate and reliable testing procedures which are adopted as standard test codes and are used as a basis for rating the industry's products. Codes have been adopted to measure the performance of all "air moving devices" and steam and hot water unit heaters, and the sound power of this equipment. The codes are periodically reviewed and revised when further knowledge and experience show that this is necessary.

Other technical standards cover a wide variety of subjects including nomenclature and arrangements, standard sizes, spark resistant construction, operating limits for centrifugal fans, and flue gas and air densities.

As a service to users of the industry's products, AMCA publishes information on the application of various types of equipment. Subjects covered include the installation and maintenance of unit heaters and the application of sound power and sound loudness ratings.

Products which have been performance rated in accordance with AMCA Standards are eligible to be licensed under the Certified Ratings Program and are identified by the display of the AMCA "Certified Ratings" Seal. The certification program includes provisions for approval of test laboratories, checking of published ratings and a recheck procedure to insure continuing product performance.

AIR POLLUTION CONTROL ASSOCIATION, Arnold Arch, Executive Secretary, 4400 Fifth Avenue, Pittsburgh, Pennsylvania 15213

This is the only technical society in the United States whose major purpose is to foster the control of atmospheric pollution and improve sanitation of the air.

Within the framework of the organization there exists a Technical Council consisting of chairmen of some thirty-nine volunteer committees in the areas of industry, equipment, and technical advice and review. It is the duty of these Technical Coordinating Committees to establish definitions, methods, processes, procedures, and recommended practical limits of emission and to set them down for the guidance of the membership of the society.

When these reports have been approved by a consensus system of approval, they are published in the "Journal of the APCA," the official society publication. Later, when sufficient of these reports have accumulated to warrant publication in separate pamphlet form, they are reproduced in publications known as Technical Manuals.

Technical Manuals #1 and #2 have now been published and represent a major contribution to encourage the development and adaptation of engineering standards of performance that are workable and reasonable. These thirty reports cover such diverse areas as the "Air Pollutional Aspects of Waste Disposal" to "Guidelines for Inspection Procedures of Motor Vehicle Air Pollution Emissions."

AIR TRANSPORT ASSOCIATION, William G. Osmun, Manager,
Technical Information Services, 1000 Connecticut Avenue, N. W.,
Washington, D. C. 20036

This Association is concerned with the following areas of standardization: (a) engineering and maintenance—the Association has published ATA Spec 100, the industry standard specification for the preparation of aircraft manuals by manufacturers for the use of airline operators; (b) supply—the Association publishes ATA Spec 200, the industry integrated data processing standard specification for the procurement of aircraft parts, and ATA Spec 300, the industry standard for packaging of parts and components of aircraft and aircraft systems; (c) communications—the ATA interline communications manual, prepared in collaboration with the International Air Transport Association, is the world-wide standard for message addressing and message format among the free world's air carriers; and (d) airborne navigation and communications equipment—the airline industry, through the Airlines Electronics Engineering Committee of Aeronautical Radio, Inc. (ARINC) develops standard characteristics, including case sizes and wiring for much of the radio and electronics equipment installed in airline aircraft. The Air Transport Association participates fully in the preparation of these "ARINC Specs."

ALUMINUM ASSOCIATION, Donald M. White, Executive Secretary-Treasurer, 420 Lexington Avenue, New York, N.Y. 10017

This Association is extremely active in developing, publishing and distributing standards and designation systems covering such topics as mechanical and physical properties, dimensional tolerances, drawing specifications, packaging, coatings and finishes, test methods and nomenclature of aluminum products.

Membership in the Association numbers 56 companies, including

all U. S. producers of primary aluminum and leading semi-fabricators of the metal. In all cases, Association standards are stimulated by specific industry-wide needs and have as a prime objective the establishment of central sources of technical data on aluminum and its alloys to eliminate confusion in the production and ordering of aluminum products.

Standards issued by the Association are developed by its Technical Committee in conjunction with any of six Commodity Divisions covering the full range of aluminum mill products. Participating members of these groups represent all branches of the aluminum industry.

The Association's current list of published material contains twelve standards, including "Standards for Aluminum Mill Products," "Specifications for Structures of Aluminum Alloys" and "Designation System for Aluminum Finishes." A number of others are in various stages of development.

Aluminum Association standards are the basis for the majority of government, ASTM, company and other specifications for aluminum and aluminum alloy products. The Association also participates actively with other standards organizations, government agencies and trade associations in developing and updating aluminum specifications.

ALUMINUM SIDING ASSOCIATION, Minita Westcott, Executive Director, 2217 Tribune Tower, Chicago, Illinois 60611

One of the primary activities of this Association has been the establishment of industry-wide recommended minimum standards to assure the purchaser of good quality products. After several years of research and development, the Technical Committee, comprised of representatives of aluminum siding manufacturers, basic aluminum producers, and producers of the coatings and finishes used by the manufacturers, recommended for adoption Specifications and Methods of Test for Aluminum Residential Siding No. 62-5-16, which was approved and successfully used as a guide for minimum standards of production by the majority of the members. Currently, the Technical Committee is reviewing the specifications in order to bring them up-to-date with new developments in the industry.

Complementing this specification, the Association has developed and published Installation Specifications for Residential Aluminum Siding, in which recommended practices for installation of siding are detailed.

Recently, in cooperation with the Aluminum Association, the Aluminum Siding Association has published an Authorized Grounding Statement with illustration for use where local building codes require grounding. Research conducted by the industry indicates, however, that grounding is not necessary when proper installation of the product has been made.

Incorporating data prepared by the Pennsylvania State University, the Association has published information on Thermal Resistance of Aluminum Siding. Other reports issued by the Technical Committee cover resistance to lightning, hail damage, fire resistance, recommended methods of test for electrical continuity, and care and maintenance of aluminum siding.

**AMATEUR ATHLETIC UNION OF THE UNITED STATES, Col.
Donald F. Hull, USA (Ret.), Executive Director, 231 West 58th
Street, New York, N. Y. 10019**

Among the several objects of this organization are the establishment and maintenance throughout the United States of a uniform definition of amateurism, and uniform rules for the administration and conduct of all athletic sports within its jurisdiction; the institution, regulation, and awarding of amateur athletic championships of the United States; and the institution of a bureau of records for the sports of swimming, track and field, and weightlifting.

This organization is charged with the duties and responsibilities of administering, as the sole United States member of world-governing sports organizations, the following: basketball, bobsled, boxing, gymnastics, handball, judo, luge, swimming and diving, track and field, weightlifting, and free-style and Greco-Roman wrestling, as well as national programs in baton twirling, horse-shoe pitching and volleyball. The Union conducts championships of the United States in all these sports, and its 55 district associations encompassing all 50 States annually hold district championships.

The establishment of standard definitions of rules for the government of athletic sports are formulated by the board of governors, which is elected each year and is representative of the active and allied member associations of the Union. Besides the adoption of standard contest rules for the various sports under its jurisdiction, the Union also fixes standards on dimensions, weights, material, and shapes of the various implements, balls, etc., entering into athletic contests.

**AMERICAN ASSOCIATION OF ADVERTISING AGENCIES/
MAGAZINE PUBLISHERS ASSOCIATION JOINT COMMITTEE ON MAGAZINE ADVERTISING REPRODUCTION,
AAAA, 200 Park Avenue, New York, N. Y. 10017; MPA, 575 Lexington Avenue, New York, N. Y. 10022**

Since its formation in 1948, the AAAA/MPA Joint Committee on Advertising Reproduction has enlisted the cooperation of other industry organizations, and three standards for the graphic arts industry dealing with magazine publication have been issued and are in use today. They are as follows: (1) Recommended Standard Specifications for Advertising Reproduction Material in Magazine Letterpress Wet Printing, Joint Committee Report No. 4 dated March 1961, (2) Standard Color Control Bars, approved by the American Photoengravers Association, October 1959, and recommended by the American Association of Advertising Agencies, Magazine Publishers Association, and Printing Industries of America; and (3) AAAA/MPA Standard 4-Color Process Proofing Inks, issued by the National Association of Printing Ink Makers, September 1964, and recommended and approved by the American Association of Advertising Agencies, Magazine Publishers Association, American Business Press, American Photoengravers Association, and Printing Industries of America.

These standards have the common purpose of improving the reproduction of advertisements in magazines, following the Joint Committee's stated objective: "The improvement of the physical presentation of advertising in magazines."

AMERICAN ASSOCIATION OF CEREAL CHEMISTS, R. J. Tarleton, Executive Vice President, 1955 University Avenue, St. Paul, Minnesota 55104

Among the stated objectives of this Association is the encouragement of scientific and technical research on cereal grains and related materials, the study of development and standardization of analytical methods used in cereal chemistry and technology, and the promotion of the spirit of scientific cooperation among all workers in the field of cereal science. A number of technical committees are appointed by the Association to carry on the collaborative studies and to organize work around definite cereal problems of interest and usefulness. These committees are engaged in subjects dealing with methods of analysis; standardization of laboratory baking; testing methods for cake flours, cookie flours, cracker flours, bread flours, and prepared baking mixes; and standardization of physical dough testing methods and equipment, flour specifications, sanitation methods, pesticide residue determinations, and methods of vitamin assay.

In addition, the Association maintains a technical policy committee which supervises and coordinates the work of the technical committees, fosters cooperation with other scientific societies having common problems and interests, and supervises operations of a standing committee on revision of "Cereal Laboratory Methods." This looseleaf book is now in its seventh edition with replacements and additions appearing yearly. It is devoted to a description of methods for the chemical analysis of wheat and flour and other cereal grains as well as physical properties of doughs, bread staling, enzyme activity, etc. The book is complete with over 90 pages of reference tables and 45 full-color photos of insect fragments in its "Extraneous Matter" section.

AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, c/o Dr. Joseph H. Boutwell, Director, Clinical Chemistry, Temple-University School of Medicine and Hospital, Broad and Ontario Streets, Philadelphia, Pennsylvania 19140

This Association is presently engaged in a study of commercial reagent sets, attempting to establish criteria of acceptable performance in precision accuracy and stability. In addition, the Association concerns itself with standardization in the following areas: (a) bilirubin—cooperated with the American Academy of Pediatrics and the American Society of Clinical Pathologists in establishing criteria for standards in serum; (b) cholesterol standardization—preparation of solid cholesterol; (c) turbidity standardization for thymo turbidity, cephalin flocculation, etc.; (d) nomenclature—of units, spectrophotometry; and (e) specifications for instruments.

AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS, Glenn V. Carmichael, Executive Director, 404 Madison Building, Washington, D. C. 20005

The Association's Engineering and Vehicle Inspection Committee cooperates in the work of United States of America Standards Institute Sectional Committee Z26 for Specifications and Methods of Test for Safety Glazing Materials. It also cooperates with USASI Sectional Committee D7 covering: D7.1 Inspection Requirements for Motor Vehicles, Tractors and Semitrailers Operated on Public Highways; D7.2 Station Requirements for Inspection of Motor Vehicles, Trailers and Semitrailers in Stations Owned and Operated by Regulatory Authority; and D7.3 Station Requirements for Motor Vehicles, Trailers and Semitrailers in Stations Appointed and Licensed by Regulatory Authority.

AAMVA is a cosponsor of the D7 Committee, and the standards are recommended to States which now operate Vehicle Inspection Programs or are considering their adoption.

The Association has also developed standards for tests used in evaluating the capabilities of applicants for licenses to operate motor vehicles. In the same field, standards are being developed for terminology adaptable to an interstate exchange of information related to driver-license and driver-performance records.

AMERICAN ASSOCIATION OF NURSERYMEN, Curtis H. Porterfield, Executive Vice President, 835 Southern Building, Washington, D. C. 20005

Through its Horticultural Standards Committee, this Association developed the grades and standards contained in USA Standard for Nursery Stock, approved by the United States of America Standards Institute as Z60.1-1959. The standards were developed for the use of nurserymen, landscape architects, landscape contractors, and others preparing planting lists and specifications or trading in trees, shrubs, roses, vines, fruit trees, small fruits, asparagus crowns, bulbs, corms, and tubers, and trees for forest plantings. The standards contain height measurements, relation of branching to quality, caliper measurement, grades of various roses, and recommended balling and burlapping specifications.

AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, A. E. Johnson, Executive Secretary, 917 National Press Building, Washington, D. C. 20004

In accord with the bylaws of the Association there is a Standing Committee on Standards composed of the chairman of the several operating committees subsidiary thereto. This Committee, through these various operating committees, investigates, studies, and reports on all engineering activities, including all phases of road and bridge design, construction, maintenance, traffic requirements, roadside development, tests and investigation of materials, and all phases of highway research. More specifically, these operating committees promote and develop the intimate contacts that are essential in (1) keeping their respective specifications, manu-

als, and standards representative of the best current practice, (2) encouraging their adoption and use, and (3) promoting engineering research in their respective fields to obtain factual data and improvements in materials and practices. In addition, the committees have the following specific primary purposes: (a) Planning and Design Policies: To investigate available data, pursue studies and recommend policies for the development of planning and design standards, which will advance to a maximum degree the utility and safety of highways in rural and urban areas. (Membership on this Committee is by appointment of the President of the Association, with the approval of the Executive Committee and shall be limited to not more than five representatives from each of the four regions, including the chairman.) Other operating committees are (b) Bridges and Structures, (c) Construction, (d) Design, (e) Design, Construction and Maintenance of Secondary Roads, (f) Maintenance and Equipment, (g) Materials, (h) Roadside Improvement, (i) Traffic, (j) Research Activities.

Additional committees are as follows: Standing Committee on Administration with Subcommittees on Administrative Practices, Highway Planning, Highway Finance, Highway Transport, Legal Affairs, Public Information, Right of Way, Uniform Accounting, Electronics, Urban Transportation Planning, Emergency Planning, Communications, Management and Training.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, George P. Paine, Executive Secretary, AATCC National Headquarters, P. O. Box 886, Durham, North Carolina 27702

This Association was founded in 1921 for the purpose of promoting the increase of knowledge of the application of dyes and chemicals in the textile industry, encouraging in any practical way research work on chemical processes and materials of importance to the textile industry, and establishing for the members channels by which the interchange of professional knowledge among them might be increased.

The membership of the Association of approximately 8,000 includes most of the leading textile chemists and colorists in 46 of the 50 states and in over 40 other countries. Some 300 companies in the textile, chemical and related industries support the Association as corporate members.

The Association is recognized nationally and internationally for its standard methods of testing dyed and chemically treated fibers and fabrics to measure such performance characteristics as color-fastness to light and washing, crease resistance, shrinkage, wash-and-wear, water resistance, flammability and the many other conditions to which textiles may be subjected.

Practically all of the textile dyes, finishes and many chemicals produced in the United States are controlled and checked by AATCC test methods. These test methods are a major factor in insuring the satisfactory performance of the billions of yards of textiles that find their way across the retail counters and into the hands of the consumer.

AATCC maintains cooperative relationships with many other

societies of kindred interests and with departments and agencies of the Federal Government. At the international level, the Association participates in the International Organization for Standardization (ISO) and the Pan American Standards Commission (COPANT) in an effort to bring about world-wide uniformity in testing procedures.

The "Proceedings" of the Association are published in the biweekly "American Dyestuff Reporter." The annual 800-page "Technical Manual" contains the Association's test methods, a bibliography, lists of dyes, pigments, and textile chemicals, a roster of members, and information of general interest. With its sister society in England, The Society of Dyers and Colourists, AATCC collaborated in the publication of the second edition of the five-volume "Colour Index."

AMERICAN AUTOMATIC CONTROL COUNCIL, c/o Prof. Gerald Weiss, Secretary-Treasurer, Department of Electrical Engineering, Polytechnic Institute of Brooklyn, 333 Jay Street, Brooklyn, N. Y. 11201

AACC, often called A²C², was formed in 1957 to represent the United States in the International Federation of Automatic Control, which now has 30 National Members. It is comprised of two representatives from the American Institute of Aeronautics and Astronautics, American Institute of Chemical Engineers, American Society of Mechanical Engineers, Institute of Electrical and Electronics Engineers, and the Instrument Society of America. Its principal functions are to plan and conduct the annual Joint Automatic Control Conference here, and to cooperate with IFAC abroad. Many standardization matters are handled directly by representatives of the above five technical societies, but AACC's Terminology Committee maintains liaison with United States of America Standards Institute Sectional Committees C85, C42, and Y10.14, and prepares an annual report on the work of these and twenty other technical groups writing standards in its field of interest. The committee also maintains liaison with the IFAC Terminology Committee, and with appropriate groups in the International Electrotechnical Commission, International Standards Organization, and the International Federation for Information Processing.

AMERICAN AUTOMOBILE ASSOCIATION, George F. Kachlein, Jr., Executive Vice President, 1712 G Street N.W., Washington, D. C. 20006

The Association has developed independently or, in cooperation with other organizations, numerous standards and models for motor vehicle legislation in the States and cities, designed to promote the safe and efficient movement of traffic. It developed a Model Safety Responsibility Bill and cooperated actively in the development of the Uniform Vehicle Code and the Model Traffic Ordinance.

It developed a guide as to standards for State legislation on roadside development and control.

The Association participated in the development of standards for traffic signs, signals, markings, and islands set forth in a Manual on Uniform Traffic Control Devices.

The Association has formulated a model ordinance for municipal regulation of offstreet parking facilities.

The Association has developed proposed standards of various types relating to increasing the safety and convenience of pedestrians in traffic.

It has developed detailed methods and various proposed standards for training new drivers. For several years it has been studying methods of examination of applicants for drivers' licenses with the idea of improving standards therefor.

The AAA has representatives on committees of the following organizations and associations: American Society for Testing and Materials, United States of America Standards Institute, Highway Research Board, Illuminating Engineering Society, National Safety Council, President's Committee for Traffic Safety, and the National Committee on Uniform Traffic Laws and Ordinances. A major purpose of most of these committees is to develop standards which pertain to highway safety.

The Association has developed, in cooperation with other organizations, standards for the operation of School Safety Patrols.

The Association cooperates with other organizations in the field of traffic law enforcement, traffic training procedures, etc.

AMERICAN BLEACHED SHELLAC MANUFACTURERS ASSOCIATION, John F. Varian, Assistant Secretary, 425 Park Avenue, New York, N. Y. 10022

With the approval and endorsement of the United States Shellac Importer's Association, the American Bleached Shellac Manufacturers Association published "Official Methods of Analysis, Standards, Specifications and General Information on Shellac and Bleached Shellac." This publication, first edition of which was issued in 1923, was revised and reissued in 1957, and it continues to be of help to those who are familiar with the properties of shellac and shellac varnishes.

AMERICAN BOAT AND YACHT COUNCIL, John G. Kingdon, Secretary, 420 Lexington Avenue, New York, N. Y. 10017

The Council is an independent, nonprofit, membership organization. It was founded in 1954 by representatives of the United States Coast Guard, the boating industry, and the marine insurance underwriters, to develop an advisory code of safety standards and recommended practices for designing, constructing, equipping and maintaining boats of all types and all sizes to 65 feet in length.

The Council's current membership consists of about 500 individuals and 25 corporations and associations. This membership is drawn from all segments of the boating industry and boating public. The individual members work voluntarily through technical committees to develop the Council's code of standards.

To date, the Council has published 24 standards. Another 25 are under development.

AMERICAN BOILER MANUFACTURERS ASSOCIATION, William B. Marx, Manager, 1180 Raymond Boulevard, Newark, New Jersey 07102

This Association, established in 1888, participates in the following standardization work: (1) Publication by the Technical Committee, Packaged Firetube Boiler Section, of ratings standards entitled "Packaged Firetube Boiler Ratings for Heating Boilers"; (2) Publication by the Technical Committee, Watertube Boilers Section, of a standard manual entitled "Industry Standards-Engineering Information," which includes suggested equipment performance forms, fuel definitions, a lexicon of industry terminology, coal analysis and accessory product definitions; (3) Acts as Secretariat to the National Fire Protection Association's Committee on Boiler Furnace Explosions and the Sectional Committees on Public Utility Units, and Industrial Units.

AMERICAN BOTTLERS OF CARBONATED BEVERAGES, Thomas F. Baker, Executive Vice President, 1128 16th Street N.W., Washington, D. C. 20036

In order to eliminate many of the difficulties arising in connection with sugar, a Standard for "Bottlers" Sugar has been established. Also, a standard has been recommended concerning the composition of solutions used for washing beverage bottles. Standard methods of control covering water, sugar, carbon dioxide, bottle washing solutions, and sanitation are suggested.

Special service for checking these items is given through the activities of the laboratory maintained by the Association at its Headquarters office.

AMERICAN BRUSH MANUFACTURERS ASSOCIATION, Robert C. Fernley, Secretary, 1900 Arch Street, Philadelphia, Pennsylvania 19103

Simplification and the establishment of standard sizes of various types of brushes have been carried on actively by this Association. Under the Auspices of the National Bureau of Standards, it initiated movements which resulted in the establishment of Simplified Practice Recommendations R43-28 for paint and varnish brushes; R88-37 for sweeps; R121-31 for block sizes for calcimine brushes; and R167-37 for counter, window, and radiator brushes. These Recommendations have been published by the Product Standards Section, National Bureau of Standards.

AMERICAN BUREAU OF SHIPPING, W. Arnott, Assistant to Chairman, 45 Broad Street, New York, N. Y. 10004

This Bureau is an international ship classification society and non-profit corporation organized under the laws of the State of New York. It has no stockholders and pays no dividends. The Bureau's work may be briefly summarized as follows: (1) The preparation of standards, called "Rules" for the construction of

hulls and machinery of merchant ships, including material specifications and regulations for periodical surveys. The Rules are published annually and are modified to keep pace with developments in shipbuilding and marine engineering; (2) the analysis of plans of vessels projected to be built, or conversions of existing vessels, to verify if they meet the standards set by the Rules; (3) the verification of the building of the new hull and its main machinery, boilers and vital auxiliaries, and the conversion of existing vessels; (4) the witnessing of the testing of materials of construction for hull and machinery; (5) the carrying out of periodic and damage surveys as called for by the Rules; (6) the carrying out of load line surveys, safety equipment surveys, radio-telegraphy surveys and the issuance of tonnage certificates, all under the authority of various governments and international conventions; (7) the annual publication of the "Record" of the American Bureau of Shipping which contains essential details of hull and machinery and survey status of Bureau-classed vessels and others; (8) the issuance of certificates of character for Bureau-classed vessels, i.e., classification certificates, seaworthy certificates, confirmation of class certificates, etc.; and (9) the issuance of cargo gear registers.

The operations of the Bureau are world-wide in scope. Offices are maintained in the principal seaports and shipbuilding centers of the world. These offices are staffed with experienced ship surveyors.

The Bureau maintains technical committees in the United States and in Belgium, Great Britain, France, Germany, Italy, Japan and the Netherlands.

AMERICAN BUTTER INSTITUTE, E. W. Gaumnitz, Executive Secretary, 110 North Franklin Street, Chicago, Illinois 60606

The Institute, founded in 1908, is the only national trade association for butter manufacturers and distributors. One of its principal activities is the standardization of laboratory techniques, materials, and supplies used in the butter industry. The Institute cooperated with the Office of Commodity Standards (now Product Standards Section), U. S. Department of Commerce, in the establishment of Simplified Practice Recommendation R261-58. This document standardizes butter cartons from 150 sizes down to 3. In addition, the Institute promotes standardized marking on bulk butter boxes to facilitate handling.

During recent years, standardized procedures and tests for checking the quality of cream and butter have been adopted. These tests were standardized in cooperation with the U. S. Food and Drug Administration.

AMERICAN CARPET INSTITUTE, William H. Rockwell, Secretary, Empire State Building, New York, N. Y. 10001

This institute is the trade association for manufacturers of carpets and rugs in the United States. As necessary, ACI prepares test methods and standards for carpets and raw materials for carpeting, as well as standards for packing and shipping carpets. Much of this work is done in cooperation with the American Society for Testing and Materials.

AMERICAN CERAMIC SOCIETY, Frank P. Reid, General Secretary,
4055 North High Street, Columbus, Ohio 43214

Through its members, this Society cooperates in the development of standards and specifications by representation on committees of the United States of America Standards Institute and the American Society for Testing and Materials. It maintains representation on committees dealing with ceramic products such as abrasives, cement, lime, gypsum, porcelain enamels, glass, refractories, structural clay products, white wares, and newer ceramic products in the electronic field.

AMERICAN CHEMICAL SOCIETY, B. R. Stanerson, Executive Secretary, 1155 16th Street, N.W., Washington, D. C. 20036

The development and revision of recommended specifications for analytical reagent chemicals is a continuing project of the Society. It is carried on by the Committee on Analytical Reagents which directs studies and submits recommended standards to the Council of the Society for approval. When approved, these specifications and test methods are edited and reproduced in book form. The work of the ACS Committee on Nomenclature has been of great importance. Centered in "Chemical Abstracts" since 1911, the work of the committee is reflected in that ACS publication. This committee maintains close contact with the Commissions of the International Union of Pure and Applied Chemistry on which members of the ACS committee frequently serve.

The Society cooperates with other organizations engaged in standardization work. It has a committee on Standardization Relations charged with responsibility for reviewing invitations to participate, and surveying areas where assistance from members of the chemical profession might be desirable.

AMERICAN COLLEGE OF SURGEONS, Preston A. Wade, M.D., Chairman, Board of Regents; John Paul North, M. D., Director, 55 East Erie Street, Chicago, Illinois 60611

The College is solely responsible at the national level for the standardization and approval of cancer programs in the United States and its territories. The College cooperates with other recognized national medical organizations in the accreditation of hospitals and in the approval of graduate training programs in general surgery and the surgical specialties. Since 1953 the College has been engaged in a cooperative effort to standardize hospital statistical procedures and methods and has developed a method to evaluate the quality of patient care in hospitals.

AMERICAN CONCRETE INSTITUTE, William A. Maples, Executive Secretary, 22400 West Seven Mile Road, Detroit, Michigan 48219

Since its organization in 1905, this Institute has been devoted to the solution of technical problems related to the design, construction, and maintenance of concrete and reinforced concrete structures and to the dissemination of information in this field.

More than 70 technical committees study specialized problems through evaluation of published information, reports of research, and majority opinion based on field practices leading to the development of committee reports. The eventual aim of committee activity is the evolution of the committee reports into standards after discussion by the Institute membership and consideration by the Standards Committee and a letter ballot of the members.

Institute standards are confined to specifications and recommended practices related to structures as a whole. Standardization of basic materials and "over the counter" components are deliberately excluded from the scope of its standardization procedures.

Current standards of the Institute are building code requirements for reinforced concrete; manual of standard practice for detailing reinforced-concrete structures; test procedure to determine bond value of reinforcing bars; specifications for concrete chimneys and for concrete pavements and bases; minimum standard requirements for precast concrete floor and roof units; and recommended practices for evaluation of strength test results of field concrete, design of concrete pavements, winter and hot weather concreting, selecting proportions for normal-weight, lightweight, and no-slump concrete, measuring, mixing, and placing concrete, application of portland cement base paint to concrete surfaces, construction of farm silos, inspection of concrete, formwork for concrete, thin-shell precast concrete, and application of mortars by pneumatic pressure. The application of these standards is supplemented by more detailed information in such publications as "ACI Manual of Concrete Inspection," "Reinforced Concrete Design Handbook," and "Formwork for Concrete."

Work is in progress on new standards related to nomenclature, curing concrete, permissible stresses in unreinforced concrete, residential concrete work, specification for structural concrete, and concrete floor finishes.

The Institute cooperates in related standardization work with the United States of America Standards Institute, American Society for Testing and Materials, and the American Welding Society.

AMERICAN CONCRETE PIPE ASSOCIATION, Howard F. Peckworth, Managing Director, 1815 North Fort Myer Drive, Arlington, Virginia 22209

Specifications for concrete pipe adopted by this Association are those which have been prepared by Committee C-13 on Concrete Pipe of the American Society for Testing and Materials on which the Association is officially represented. These specifications are for concrete sewer pipe, reinforced concrete culvert, storm drain and sewer pipe, concrete irrigation pipe, reinforced concrete low-head pressure pipe, and concrete drain tile.

The Association has also cooperated with the General Services Administration of the Federal Government in the development and publication of Federal Specifications for concrete sewer pipe and reinforced-concrete sewer pipe.

Recommendations for the design and installation of concrete

pipe culverts under high fills have been prepared by the U. S. Bureau of Public Roads with the assistance of this Association. The Association has also assisted the Corps of Engineers, U. S. Army, in the preparation of guide specifications on concrete pipe.

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, Andrew D. Hosey, Secretary-Treasurer, 1014 Broadway, Cincinnati, Ohio 45202

This Conference is the national professional association of practicing industrial hygiene personnel in Federal, State, and local agencies. Through its committees, the ACGIH assembles guides, recommended practices, and methods for the evaluation and control of the industrial environment.

The Conference publishes an annual listing, "Threshold Limit Values," containing TLVs for over four hundred substances (mostly chemicals and chemical compounds) in dusts, fumes, gases, vapors, mists, etc. The Values, which are under continuous review, are used as guides in the control of health hazards and should not be regarded as fine lines between safe and dangerous concentrations. Several States, the U. S. Department of Labor, and the British Ministry of Labour incorporate the TLVs in codes or regulations.

The "Manual of Recommended Analytical Methods" describes chemical procedures and techniques for analysis of airborne contaminants (in-plant as opposed to air pollution) which can be performed without expensive specialized equipment. Fifteen methods have been published to date and are verified in a number of cooperating laboratories.

The Conference also publishes "Guide to Uniform Industrial Hygiene Codes or Regulations," used by governmental agencies in the preparation of legal codes or regulations, and "Industrial Ventilation—A Manual of Recommended Practice." This Manual is a practical reference for the design and construction of ventilation exhaust systems. Basic ventilation principles are discussed and there are about 150 illustrations.

AMERICAN CONGRESS ON SURVEYING AND MAPPING, Walter S. Dix, Executive Secretary, National Headquarters: 430 Woodward Building, Washington, D. C. 20005

This organization is objectively dedicated to the improvement and development of technical and professional standards to guide and govern the practice within the fields of surveying and mapping in the public interest.

ACSM is constituted by a membership of over 5,000 individual Members, Associate Members, and Affiliate Members active in 3 technical Divisions and 22 geographic Sections. The constituent membership of ACSM is further expanded by hundreds of surveyors due to Institutional Affiliation of 28 State Land Surveyor organizations with ACSM. ACSM itself is affiliated with the Earth Sciences Division of the National Research Council, the Federation Internationale des Geometres (International Fed-

eration of Surveyors), and the International Cartographic Association.

ACSM supports active national and divisional committees in pursuit of developing and improving both technical and professional standards of procedure and accuracy in survey measurement, in quality control and requirement content for specific surveys, in standards of education for qualification to meet requirements, and model laws for governing licensing and recordation practices in the public interest. ACSM develops some standards within ACSM, but also cooperates with other mutually interested groups in developing joint standards. Published standards include: "Technical Standards for Property Surveys," developed by ACSM Property Surveys Division; and "Minimum Standard Detail Requirements for Land Title Surveys," developed cooperatively between the American Congress on Surveying and Mapping and the American Title Association (now American Land Title Association).

ACSM, with other societies, cooperated in an advisory capacity with an American Society of Civil Engineers task subcommittee to develop ASCE Manual No. 45A, which is an ACSM endorsed standard entitled "Professional Practice of Surveying and Mapping Within Civil Engineering."

AMERICAN DENTAL ASSOCIATION, Harold Hillenbrand, Executive Secretary, 222 East Superior Street, Chicago, Illinois 60611

This Association, through its Council on Dental Research and in cooperation with the National Bureau of Standards, has had a specification and certification program for dental materials since 1928. To date, 18 specifications and four standards have been adopted. The Specifications Committee of the Dental Materials Group (International Association for Dental Research) serves as the principal consultant to the Council on Dental Research of the American Dental Association and does almost all of the current revision and formulation of ADA specifications for dental materials. The Association also operates a certification program on dental materials which involves the testing of materials guaranteed by the manufacturers to comply with the specifications of the ADA. The "Guide to Dental Materials," a biannual ADA publication of about 160 pages, gives pertinent information on several dental materials, details about the specification and certification program, the specifications and lists of certified dental materials.

Most of the ADA specifications for dental materials and instruments have been approved as USA Standards. The ADA, an associate member of the United States of America Standards Institute, has been named proprietary sponsor of the project to handle future revisions of these standards. It also sponsors USASI Sectional Committee PH6 which has developed two standards for size and speed of diagnostic grade dental radiographic film.

The Association, through USASI, participates in the recently formed International Organization for Standardization Technical Committee 106 on Dentistry. Thus the ADA works both nationally and internationally in the formulation of standards for dental materials.

AMERICAN DENTAL TRADE ASSOCIATION, Edmund Wellington, Jr., Executive Secretary, 1010 Vermont Avenue N.W., Washington, D. C. 20005

One of the standardization activities of this organization is a color-shade standardization program on which the color formula and identification have been propounded for the main colors used on dental equipment by manufacturers.

For the past 40 years the Association has maintained a "Standard Manual of Accounting for Dental Dealers" which is revised about every 5 years to keep it up to date with modern accounting practices and procedures.

AMERICAN DIE CASTING INSTITUTE, R. E. Kellers, Associate Secretary, 366 Madison Avenue, New York, N. Y. 10017

As a service to the customers of the die casting industry, this Institute publishes Product Standards for Die Castings to guide designers and engineers to the most economical use of die castings. These Product Standards are not intended as maximal specifications. The information set forth is based on normal practices of the die casting industry which, if followed, can bring about the production of serviceable and quality die castings on the most economic basis. The Product Standards for Die Castings are composed of three series covering Engineering, Metallurgical and Commercial practice data.

AMERICAN DRY MILK INSTITUTE, J. T. Walsh, Executive Director, 130 North Franklin Street, Chicago, Illinois 60601

The Institute, operating through its Standards Committee, is continuously engaged in the establishment and improvement of standards for the grading of dry milk products, including nonfat dry milk, dry buttermilk, and dry whole milk. The standards, grades and methods of analysis developed by the Institute have also been adopted by various Government agencies. These standards, which are designed to measure general overall product quality are widely used by both the manufacturers of dry milk products and the users of these products.

AMERICAN ELECTROPLATERS' SOCIETY, Rodney Leeds, General Manager, 443 Broad Street, Newark, New Jersey 07102

This Society is actively interested in standards pertaining to electroplated coatings. It relies on the work of ASTM Committee B-8 on Electro-deposited Metallic Coatings and endorses the standards prepared by Committee B-8, whose members are, for the most part, members of the American Electroplaters' Society. Formal representation is also maintained on ASTM Committees A-5 on Corrosion of Iron and Steel, D-19 on Industrial Water, and B-7 on the Anodic Oxidation of Aluminum and Magnesium Alloys, as well as United States of America Standards Institute Committees Z74 on Performance of Effluent Air and Gas Cleaning Equipment and Z9 on Safety Codes for Exhaust Systems.

From 1935 to 1941 the American Electroplaters' Society, the American Society for Testing and Materials, and the National Bureau of Standards jointly prepared five specifications for electrodeposited metallic coatings and one method of test.

AMERICAN FEED MANUFACTURERS' ASSOCIATION, W. E. Glennon, President, 53 West Jackson Boulevard, Chicago, Illinois 60604

This Association cooperates very closely with the Association of American Feed Control Officials, both of which have been in existence for 50 years. The work of this organization has to do with bringing about uniformity as far as possible in all State laws regulating the manufacture, distribution, and sale of commercial feeding stuff. Every State in the Union except one has at the present time enacted legislation concerning regulations and specifications of commercial feeds sold in the States.

This Association cooperates also with the Food and Drug Administration, in its enforcement of the Federal Food, Drug, and Cosmetic Act.

AMERICAN FOUNDRYMEN'S SOCIETY, Ashley B. Sinnett, General Manager, Golf and Wolf Roads, Des Plaines, Illinois 60016

With the exception of standards which the Society has developed for the evaluation of foundry sands, standardization has been carried out in cooperation with the American Society for Testing and Materials and the United States of America Standards Institute by the appointment of representatives to serve on committees of these organizations.

Realizing the need for having industry-developed foundry process codes, it has continued its activities in the field of Safety, Hygiene, and Air Pollution Control. As a result of this program the Society has developed: Engineering Manual for Control of In-Plant Environment in Foundries; Foundry Air Pollution Control Manual; Manual of Safe Practices for the Protection of Workers in Foundries; Safe Practices Manual for Welding, Cutting, and Similar Operations; Symposium on Foundry Safety, Health, and Air Pollution; Health Protection in Foundry Practice; and the Foundry Noise Control Manual.

As a result of representation on a sizable number of technical committees of the American Society for Testing and Materials, it has cooperated in the development of specifications dealing with both cast metallic and nonmetallic materials covering a broad range of commodities.

AMERICAN GAS ASSOCIATION, C. S. Stackpole, Managing Director, 605 Third Avenue, New York, N. Y. 10016, F. E. Hodgdon, Assistant Managing Director, and Director, A.G.A. Laboratories, 1032 East Sixty-Second Street, Cleveland, Ohio 44103

This Association sponsors research and standardization activities relating to problems affecting the production, distribution, sale, and utilization of gas.

Problems connected with the development of national standards for gas appliances are entrusted to the Approval Requirements Committee. This committee has general supervision over the preparation of all approval requirements for gas-burning appliances, listing requirements for gas appliance accessories, and installation requirements for house piping, appliances, and accessories. It is responsible directly to the Board of Directors of the American Gas Association. Being a sectional committee of the United States of America Standards Institute, it is also responsible to the Board of Directors and Standards Council of USASI when requirements are submitted and approved as USA Standard. This group is a standing committee and has operating under it, at the present time, some 24 requirements subcommittees. It makes assignments to these subgroups, has general supervision of their work, and passes on all requirements developed by them. It authorizes the appointment of additional subcommittees from time to time for the development of requirements for additional types of equipment or for other purposes as the necessity arises. The chairman appoints members of all standing and special subcommittees. New or revised requirements which have been developed by a subcommittee, after distribution for industry review and comment, are reviewed and adopted by the Approval Requirements Committee. They are then submitted to the Board of Directors and to the United States of America Standards Institute for approval as USA Standard.

A second committee of the Board of Directors and USASI Sectional Committee functions along similar lines to the Approval Requirements Committee and is charged with the preparation of standards for the installation, safe operation, testing, maintenance and nomenclature of industrial gas equipment. This committee, known as USASI Sectional Committee Z83, Industrial Gas Equipment Installation and Utilization, supervises the work of three subcommittees.

The chairman, secretary, and other members of these committees are appointed by the President of the American Gas Association. Nominations by the Gas Appliance Manufacturers Association are considered in making manufacturer member appointments. Two of the gas company representatives on USASI Sectional Committee Z21 must also be members of the Laboratories Managing Committee. Members representing Government bureaus and trade associations are selected by the organizations they represent on request of the committee chairmen. The Director of the Laboratories is a member of these groups and serves as secretary.

Subcommittees of the USASI sectional committees receive assignments from and are responsible to their respective USASI committee. Each subcommittee is usually charged with the detailed development of requirements for one particular class of gas appliance, or gas appliance accessory. When a subcommittee has completed a set of requirements it is submitted to its supervising committee for further consideration. The subcommittee's work continues from year to year in the revision of and addition to the requirements. These committees also serve another purpose as they are often called upon by the American Gas Association Labo-

ratories to interpret certain requirements when a need for clarification arises.

There are three classifications of subcommittees serving under the Approval Requirements Committee, namely, those instructed to prepare requirements for (1) approval, (2) listing, and (3) installation. At present the Committee on Industrial Gas Equipment Installation and Utilization confines its efforts to requirements for installations.

Approval requirements are prepared for complete self-contained gas-burning appliances or those which consist not only of equipment for burning the gas but also for utilizing the heat or products of combustion therefrom, such as gas ranges or boilers. Listing requirements are drawn up for accessories, such as valves, thermostats, and others which are incorporated as a part of a gas appliance. Requirements for installation of gas appliances are prepared for the guidance of the industry in making correct installations of gas equipment.

Approval, listing, and installation requirements have been developed by the American Gas Association and approved as USA Standards by the United States of America Standards Institute, covering practically all types of domestic gas appliances, many industrial and commercial appliances, and gas appliance accessories.

The approval requirements include domestic gas ranges (including freestanding ranges and built-in cooking units); hotel and restaurant deep fat fryers; portable gas baking and roasting ovens; gas counter appliances; room heaters (including radiant heaters, circulator heaters, wall heaters, and overhead heaters; gas logs and imitation coal baskets); water heaters (including storage, circulating tank, instantaneous, etc.); central heating gas appliances (including steam and hot water boilers, central furnaces, vented wall furnaces and floor furnaces); gas unit heaters; hot plates and laundry stoves; clothes dryers; incinerators; hotel and restaurant ranges and refrigerators using gas fuel.

Listing requirements have been published for the following types of accessories: Gas-burner valves; gas conversion burners; draft hoods; domestic gas appliance pressure regulators; relief and automatic gas shutoff valves for use on water heating systems (including temperature and pressure relief valves, vacuum relief valves, and automatic gas shutoff valves); water heater, gas range, and room heater thermostats; automatic pilots; automatic main gas-control valves (including electric gas valves and diaphragm-type valves); semirigid gas appliance connectors; flexible gas tubing; furnace temperature limiting controls and fan controls.

In addition to the above requirements which involve laboratory testing, the committees have developed the following standards of general interest to the industry which include: Installation of domestic gas conversion burners, and installation of gas piping and gas appliances in buildings.

The Approval Seal and Listing Symbol of the American Gas Association are registered by the U. S. Patent Office and may be used on appliances and accessories, in advertising or otherwise, only with the consent of the Association's Laboratories. The Approval Seal and Listing Symbol are intended to indicate that the

equipment to which they are attached has been tested and approved or listed by the American Gas Association Laboratories as complying in detail with all requirements in effect at the time approval or listing was granted. When approval or listing has been granted, it is mandatory that the official insignia in exact accordance with the Association's requirements be prominently displayed on the appliance or accessory. The Approval Seal or Listing Symbol may be shown on, or advertised in conjunction with only such appliances, appurtenances, or accessories currently approved or listed at the time shown or advertised.

The registered Seal of Approval must be permanently attached to all approved gas appliances. As this permanent seal is usually attached to the manufacturer's nameplate and located in a concealed position, an auxiliary approval seal in the form of a cardboard tag of approved design may be affixed, in a conspicuous position, to the front of every approved appliance. Nameplate manufacturers supply the permanent seals while the Laboratories supply tags at cost.

After approval or listing has been granted on an appliance or accessory, the appliance or accessory will be identified in the "Directory of Approved Appliances and Listed Accessories." This publication is issued in complete form semiannually as of January and July. Supplements are published as of the first of each intervening month, including all devices approved during the preceding month. This is the official record of approved or listed equipment, and all appliances entitled to bear the Approval Seal or Listing Symbol are included therein.

Approval of appliances and listing of accessories are granted for the ensuing calendar year. Approval and listing may be renewed, however, from year to year for a period not to exceed a total of 5 years by means of an annual factory-inspection service. At the expiration of this period the appliance or accessory is required to be resubmitted to the Laboratories and subjected to the requirements then in effect, if further certification is desired. If there has been no change in the requirements or the appliance since it was last tested, no actual test may be needed and extension may be granted by inspection.

AMERICAN GEAR MANUFACTURERS ASSOCIATION, John C. Sears, Executive Director, One Thomas Circle, Washington, D. C. 20005

This Association was founded in 1916; its membership includes a majority of the principal manufacturers of gears, speed reducers and increasers in the United States and Canada.

One of the objectives of American Gear Manufacturers Association is the creation and maintenance of gearing standards. These standards are intended to create a common-language bridge between the manufacturer, designer, and user so that they may better understand one another to the end that the gears will fit the users' needs.

These standards cover such areas as: Gear Industry Nomenclature, Gear Specification Drawings, Hobs and Shaper Cutters,

Application Classification of Gear Motors and other types of speed reducers, Standards on Tooth Form Geometry, Strength and Durability Formulas, Inspection Methods and Practices, Gear Blank Materials, Lubrication of Open or Enclosed Gearing, Design and Rating of Speed Reducers, Spur, Helical, Herringbone, Worm, Bevel, Fine Pitch, Aircraft, Rocket, and Missile Gears.

Among the best gear-engineering brains in the United States and Canada representing manufacturers, designers, and users, as well as teachers of mechanical engineering and the gear art in the major universities have contributed to the creation of this literature.

American Gear Manufacturers Association has always maintained close liaison with the United States of America Standards Institute, American Society of Mechanical Engineers, Society of Automotive Engineers, Metal Cutters' Institute, Cooling Tower Institute, American Petroleum Institute, and other such technical societies.

AMERICAN GEM SOCIETY, Alfred L. Woodill, Executive Director, 3142 Wilshire Boulevard, Los Angeles, California 90005

This Society numbers among its committees a Nomenclature Committee, whose personnel consist primarily of retail jewelers throughout the United States and Canada, and advisory groups of diamond importers and jewelry manufacturers. This committee considers recommendations from its members in the various branches of the trade, and makes recommendations regarding definitions, standards, and practices for consideration and adoption by the entire membership of the Society at its annual meetings. In carrying forth its work, this committee cooperates with the Jewelers' Vigilance Committee, National Association of Better Business Bureaus and its affiliated bodies, and the Federal Trade Commission.

AMERICAN GUM IMPORTERS LABORATORIES, R. O. Innes, Secretary-Treasurer, 2 Park Avenue, New York, N. Y. 10016

The chemical consistency of natural resins has been exceptionally uniform, and the long established standards supplied by our contributing member firms constitute reliable standards based on years of experience. A "National Resins Handbook," which contains much data on the properties and application of natural resins, is published by this organization. Most of the data so compiled are the result of the research and development program being carried out by the Laboratories.

AMERICAN HARDBOARD ASSOCIATION, Donald Linville, Executive Secretary, 20 North Wacker Drive, Chicago, Illinois 60606

This Association, organized in 1952, comprises 12 domestic companies operating 16 plants and represents approximately 97 percent of the domestic production of hardboard.

In cooperation with the Commodity Standards Division, (now Product Standards Section), National Bureau of Standards, the Association assisted in the establishment of Commercial Standard

CS251-63 covering the wide range of hardboard products. Now in preparation is an additional standard specifically related to Hardboard Siding. As the range of hardboard products expands, it is likely that additional standards will be prepared.

AMERICAN HOME ECONOMICS ASSOCIATION, Dr. Jane L. Rees, Executive Director, 1600 Twentieth Street, N.W., Washington, D. C. 20009

This Association, founded in 1909, sponsors United States of America Standards Institute Sectional Committee Z61 concerned with dimensions, tolerances, and terminology for home cooking and baking utensils. In addition, the Association expresses its interest in standards through representation on USASI Sectional Committees dealing with the following subjects: Standards for Household Refrigerators; Standards for Rug Cleaning; Textiles, including U. S. Committee for ISO/TC 38, and other textile committees; Standards for Gas Burning Appliances; Prevention or Control of Hazards to Children; and Safety Requirements for Architectural Glazing Material. AHEA is also represented on the USASI Board of Directors, USASI Standards Council, and USASI Consumer Goods Standards Board.

AMERICAN HOME LAUNDRY MANUFACTURERS' ASSOCIATION, Guenther Baumgart, President, 20 North Wacker Drive, Chicago, Illinois 60606

This organization, through its Engineering and Research Committee, is developing Recommended Performance Evaluation Procedures for washers and dryers for industry use. It collaborates with the Underwriters' Laboratories and other organizations in formulating safety standards and specifications covering electrical, mechanical safety and fire hazards. It works cooperatively with recognized plumbing authorities in the development of uniform plumbing requirements for home laundry appliances. The Association has published a home laundering dictionary with over two hundred standard definitions of home laundering terms recommended for use in education, home economics, marketing, advertising, and other fields.

AMERICAN HOME LIGHTING INSTITUTE, 360 North Michigan Avenue, Chicago, Illinois 60601

This Institute introduced its Minimum Light for Living Standards in 1957. These Standards were revised in September, 1965. Approximately one-third to one-half million copies have been distributed by the Institute, and the Standards have been reprinted in numerous publications.

These Standards, or adaptations, are requirements for the Medallion home in most communities where electric utilities use the Medallion as a mark of electrical excellence. The current rate is about 1 out of 10 new housing units. Most recommendations are also incorporated in the USA Standard Requirements for Residential Wiring.

The introduction to the Standards describes their purpose to

help the reader "apply advanced lighting techniques and use the newest equipment to add immediate and permanent value to a house or apartment and improve livability for its occupants."

AMERICAN HOSPITAL ASSOCIATION, Edwin L. Crosby, M.D.,
Director, 840 North Lake Shore Drive, Chicago, Illinois 60611

For more than 35 years this Association has been actively concerned with simplification and standardization of hospital supplies and equipment. Through the effort of its Committee on Purchasing, Simplification and Standardization and in cooperation with the U. S. Department of Commerce, National Bureau of Standards, over 20 Simplified Practice Recommendations and 15 Commercial Standards have been developed relative to hospital supplies and equipment.

Early in this program standards were developed for Rubber Sheeting, Surgeon's Latex gloves, Surgeon's Rubber Gloves, Mattresses for Hospitals, and Blankets for Hospitals. More recently, Commercial Standards have been prepared on Gowns for Hospital Patients and Latex Foam Mattresses for Hospitals.

Recent Simplified Practice Recommendations include Plastic Tableware, Surgical Sutures, Clinical Utensils, and Medical and Surgical Hypodermic Needles.

Many of the Commercial Standards and Simplified Practice Recommendations are being kept current by revision. These include Clinical Thermometers, Surgical Dressings, Color Markings for Anesthetic Gas Cylinders, Surgical Gauze, and Hospital and Institutional Cotton Textiles.

In cooperation with the Commodity Standards Division (now Product Standards Section), National Bureau of Standards, standards have been developed on Casters, Wheels, and Glides for Hospital Equipment. Revisions are being studied on the standards for Hospital Beds, Gowns for Hospital Patients, and Hospital Rubber Sheeting.

New projects which are under consideration for development by the committee are the simplification of color identification methods for syringes, needles, gloves and other hospital supplies; standards for bumpers on wheeled equipment; and a recommendation on needle sizes for disposable hypodermic needles.

In addition to the standardization and simplification activities in cooperation with the Government, the American Hospital Association has been actively cooperating with the United States of America Standards Institute, International Organization for Standardization, and American Society for Testing and Materials in the preparation of standards in over 30 areas of interest to hospitals.

AMERICAN HOT DIP GALVANIZERS ASSOCIATION, Charles E. Perry, Secretary-Treasurer, 5225 Manning Place, N.W., Washington, D. C. 20016

The purposes of this Association are: To improve the efficiency of our industry and to promote the wider use of hot dip galvanized products. Both are essential to the continuing growth and pros-

perity of the industry. These objectives can only be achieved by the collective action of the industry represented by an aggressive association; to improve public relations in said industry through publicity and other proper and lawful means; to encourage and promote technical research and development; and to furnish technical advice to participants in said industry.

The Association has prepared and issued tentative standard specifications for hot-dipped zinc coated (galvanized) products. It maintains a full technical development program on matters of general interest to the industry, covering such subjects as the preparation of codes of practice and recommended procedures and the evaluation of new materials and techniques.

A Joint Research Committee between the American Hot Dip Galvanizers Association and the American Zinc Institute was set up to investigate methods of improving the long-term performance of galvanized steel and of increasing the salability of the product.

The Association is represented on subcommittees of the American Society for Testing and Materials concerned with the development of specifications for galvanizing. It is also a member of the American Road Builders Association and the National Association of Corrosion Engineers.

AMERICAN HOTEL AND MOTEL ASSOCIATION, Lawson A. Odde, Executive Vice President, 221 West 57th Street, New York, N. Y. 10019

The activities of this Association in the field of standardization are carried out in cooperation with other organizations.

Prior to 1950, activities included collaboration with the Vitriified China Manufacturers Association in establishing standard sizes of hotel chinaware as set forth in Simplified Practice Recommendation R5, published by the National Bureau of Standards. It also cooperated in the formulation of Simplified Practice Recommendation R113 relative to standard sizes of restaurant guest checks. Under the procedure of the United States of America Standards Institute, it cooperated, through representation on sectional committees, in the development of USA Standard Safety Code for Elevators, Dumbwaiters, and Escalators; and USA Recommended Practice for the Inspection of Elevators. It is also represented on USASI sectional committees on standards and specifications for refrigerators, and on minimum requirements for plumbing and standardization of plumbing equipment.

Between 1950 and April 1958 the Association sponsored a project under the auspices of the United States of America Standards Institute to develop minimum performance requirements for institutional textiles, which resulted in the establishment of USA Standard L24 Minimum Performance Requirements for Institutional Textiles. In accordance with the United States of America Standards Institute procedure, the L24 Standards were completely revised in 1963 and 1964.

The Association is represented on the American Society for Testing and Materials Administrative Committee on Simulated Service Testing, and Ad Hoc Committee on Consumer Standards.

It continues as sponsor of United States of America Standards

Institute Sectional Committee L24 Institutional Textiles and is represented on the USASI Standards Council, Safety Standards Board—General Conference on Customer Injury Statistics, and Sectional Committees A14 Construction; Care and Use of Ladders, L26 Rug Cleaning, and Z64 Mass Feeding Kitchen Utensils and Containers.

The Association's former activities in the development of standards for mattresses, carpets, and cleaning and maintenance supplies have been transferred to the Institutional Research Council, Inc.

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION, George D. Clayton, Executive Secretary, 14125 Prevost Street, Detroit, Michigan 48227

The Association was established in 1939 by leading industrial hygienists as a result of need for an association devoted exclusively to industrial hygiene.

The objectives of the Association are: (1) To increase the knowledge of industrial hygiene through interchange and dissemination of information; (2) to promote the study and control of environmental factors affecting the health and well-being of industrial workers; (3) to correlate such activities as are conducted by individuals and agencies throughout industrial, educational, and governmental groups; and (4) to bring together persons interested in the various phases of industrial hygiene.

The Association speaks or acts for industrial hygienists in matters of general interest, e.g., dissemination of information on the fundamentals of industrial hygiene; definition of the scope of industrial hygiene; development of nomenclature in industrial hygiene; improvement of the education, training, and status of industrial hygienists; solutions of problems of industrial hygiene in national and other emergencies, in part by encouraging the optimum use of available industrial hygienists and the training of new ones; cooperation with various organizations such as the United States of America Standards Institute and Governmental agencies in the preparation of various codes and approval schedules; and presentation of awards to members of the Association for outstanding service in the field of industrial hygiene.

AMERICAN INSTITUTE OF ARCHITECTS, DEPARTMENT OF PROFESSIONAL SERVICES, Robert J. Cowling, AIA, Director of Technical Programs, 1735 New York Avenue, N.W., Washington, D. C. 20006

The Institute not only reflects the opinion of the profession but, by reason of its members' professional relationship to the building public, represents the interest of the consumer on a number of committees dealing with standardization and simplification of construction materials and techniques.

The AIA is represented on the United States of America Standards Institute's Construction Standards Board; it cosponsors USASI Committees A17, Safety Code for Elevators, and A23,

School Lighting; and is actively represented on sixteen USASI committees.

The Institute maintains active liaison with the Building Officials Conference of America, Southern Building Code Congress, and the International Conference of Building Officials. AIA representatives serve as advisory members on ICBO Code Change Subcommittees. Representatives also participate in activities of the Building Research Institute, National Research Council of the National Academy of Sciences, National Fire Protection Association, and the U. S. Department of Commerce.

AIA issues a variety of contract forms and has been instrumental in the formulation of recommendations concerning size and character of building product literature directed to the architect. It has also been active in development of a uniform system for correlation of a specifications outline, a filing system for product data, and project cost accounting guide.

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, F. J. Van Antwerpen, Secretary, 345 East 47 Street, New York, N. Y. 10017

The active standards work of this Institute began in the late 1940's when a committee was established to formulate procedures for testing chemical engineering equipment under non-ideal conditions that occur in plants using the equipment. At the present time, this Equipment Testing Procedures Committee performs its work through eight equipment subcommittees (distillation columns, dryers, evaporators and crystallizers, heat exchangers, filters, fired heaters, mixers, and pumps) and one staff/service subcommittee (measurements). At least one testing procedure has been published in each of these categories, except filters and fired heaters, and all eight groups are currently drafting additional testing procedures.

In December 1954, a Standards Committee was created which was designed to (1) cooperate with and contribute to the program, carried out under United States of America Standards Institute procedures, of developing and promoting national standards affecting the chemical industry and (2) develop and promote within its own organization those specific industry standards and testing procedures that were judged sufficiently valuable and appropriate to the industry to warrant professional attention, but which were not necessarily broad enough in scope to warrant formal action through the extensive USASI procedure. Safeguards were also established to prevent duplication or overlapping of the work of USASI and other organizations such as the American Society for Testing and Materials and the Power Test Codes Committee of the American Society of Mechanical Engineers.

To carry out and strengthen its standards program, an Executive Board was created in 1964, each member of which has direct responsibilities for some area of standardization activity. Through this Board, the Institute controls and monitors its participation in standards activities (1) by representation of certain of its members on the USASI Standards Council and on USASI Standards Boards operating in the three areas of interest to chemical

engineers and the chemical industry, (2) by liaison representation on the Board of the chairman of any AIChE Committees having active standardization programs, (3) by specific action within the committee itself in such fields as symbols and nomenclature and (4) by working participation in the standards-writing activities of 21 USASI sectional committees.

AMERICAN INSTITUTE OF LAUNDERING, Dr. R. H. Johnson, Jr., Executive Vice President, Joliet, Illinois 60434

This Institute is the national trade association of the family laundry and institutional laundry industry, and includes Canadian as well as a number of foreign memberships throughout the world.

Although the Institute represents a service industry, it operates a testing program for manufacturers on a fee basis (Certified Washable Seal) for checking the serviceability of launderable textiles, bindings, closures, trim, interlining, etc., to repeated laundering.

Launderable items that withstand repeated commercial launderings successfully are awarded, by contract, the Institute's Certified Washable Seal. This program helps to establish a quality standard in the lines of fabrics or garments involved.

Lines of merchandise are checked at suitable intervals and the program is "policed" by the hundreds of Institute members located in practically every community of the United States.

In addition, the Institute maintains research laboratories for the development of better laundering methods. These laboratories are staffed by textile chemists, engineers, and accountants, who prepare, for their members, Service Bulletins and Special Reports of studies that are being made. Trained sales, advertising, and public relations personnel also are a regular part of the Institute's staff.

The Institute also operates an actual commercial laundry and drycleaning department on a profit basis. This enables members to visit the Institute and study its daily operations using the most recently produced equipment of the various machinery manufacturers and others. The drycleaning department is operated to serve the needs of 85 to 90 percent of the Institute's members who are in the drycleaning business. AIL, however, does not attempt to compete in any way with the trade association activities of the National Institute of Drycleaning.

The Institute also operates a School of Laundry Management for the training of young men and women for supervisory and managerial work within the industry and special clinics on specific subjects. Several thousands of its graduates are working within the industry.

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, R. William Taylor, General Secretary, 345 East 47th Street, New York, N. Y. 10017

Many of the standards, specifications, and codes that have engaged the attention of this Institute were developed in cooperation with national technical bodies, principally the United States

of America Standards Institute and the American Society for Testing and Materials.

The Institute is officially represented on several USASI sectional committees including those dealing with the following subjects: safety code for jacks; safety code for cranes, derricks and hoists; code for pressure piping; classification of tools, fixtures and gages; deep well vertical pumps; electrical and magnetic magnitudes and units; temperature measurement thermocouples; electrical equipment in coal mines; drainage in coal mines; wire rope for mines; construction and maintenance of ladders and stairs for mines; safety code for coal mine transportation; fire fighting equipment in metal mines; electrical equipment in metal mines; recommended safe practices for underground mine transportation; nuclear glossary subcommittee; reactor safety standards; abbreviations; letter symbols; graphical symbols and designations; petroleum products and lubricants; sieves for testing purposes; protective occupational footwear; fluid permeation.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION, John K. Edmonds, Executive Vice President, 101 Park Avenue, New York, N. Y. 10017

This Institute is the national technical specifying and trade organization for companies who fabricate the structural steel frames for buildings and bridges. It engages in research, engineering and promotion.

Its two major documents are "The AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings," and the "Manual of Steel Construction." In addition, it published the "AISC Code of Standard Practice," and a number of specifications for materials, products, and assemblies which may be used in steel framed structures. The specifications and the Manual are accepted and used universally by architects, engineers, building code bodies, and Government agencies.

The Institute promotes steel construction through the efforts of a large national engineering staff who supervise research projects, determine standard design rules, compile engineering tables, and advise concerning the most economic methods for designing steel structures.

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, Frank J. Hanrahan, Executive Vice President, 1757 K Street, N.W., Washington, D. C. 20006

The Technical Advisory Committee of the Institute has the responsibility for developing and keeping up to date industry standards, including those on design, fabrication, assembly, erection, construction details, cross arms, and industry practices. It also is responsible for making technical studies and formulating technical recommendations in the structural and construction fields as warranted. The AITC Research Committee initiates and conducts research leading to standards.

Efforts of these committees have resulted in the AITC "Tim-

ber Construction Manual" and the revised AITC "Timber Construction Standards."

The AITC carries on a Quality Control and Inspection Program for Structural Glued Laminated Timber, which is based on the industry-developed U. S. Commercial Standard CS253 for Structural Glued Laminated Timber and the AITC "Inspection Manual." Under the program, the Institute provides Quality Marks and Certificates of Conformance to identify material which conforms with the requirements of CS253.

AMERICAN IRON AND STEEL INSTITUTE, John P. Roche,
President, 150 East 42nd Street, New York, N. Y. 10017

One of the major activities of this Institute is in connection with a project involving the selection and standardization of a group of steels to be known as standard steels. This work is being carried on under the auspices of the Institute by technical committees, the titles of which are indicated by the following subjects with which they deal: Alloy steel, axles, carbon steel bars, cold-rolled strip steel, hot-rolled strip steel, plates, rails, semifinished steel, sheet steel, structural shapes, tin plate, terneplate, and black plate, track accessories, tubular products, wire rods and wire, wrought-steel wheels, and specifications and publications.

Each of these individual technical committees is doing considerable work in classifying and defining the products, in collecting and compiling manufacturing tolerances and methods relative to standard methods of inspection for the respective products, and in reviewing existing specifications with a view toward standardizing those which are found to be most common. The work of the respective committees is presented in a series of sections of a "Steel Products Manual." All these committees have and still do, from time to time, cooperate with agencies of the Federal Government, including the Department of Defense and Department of Commerce, as well as with technical and trade organizations in matters relating to technical problems and specifications.

The Institute has published a book entitled "Light Gauge Cold Formed Steel Design Manual" in which design standards for light gauge structural sections are set forth.

It is officially represented on United States of America Standards Institute sectional committees on mechanical standards and standardization of methods of recording and compiling accident statistics, all standards and specifications for petroleum products and lubricants, and fire tests of materials and construction.

AMERICAN LADDER INSTITUTE, Don E. Mowry, Executive
Secretary, 666 Lake Shore Drive, Suite 2353, Chicago, Illinois 60611

This Institute was one of three sponsors for the portable wood, portable metal and fixed ladder codes enacted through the American Standards Association. The Institute, whose membership comprises wood and metal ladder manufacturers throughout the United States, has pioneered in the manufacture of wood and metal ladders that comply with the provisions of these three codes.

In recent years there have been many accidents due to noncompliance with safety provisions of the Standard Ladder Codes. The Institute has frequently called the attention of various agencies to the need for labeling both metal and wood ladders to indicate the various kinds of ladders available and the purposes for which they are designed, e.g., Light Household, Medium-Duty Household, Heavy Household, Heavy-Duty Mechanics Extension Ladder, Heavy-Duty Household Magnesium Flat Step Extension Ladder, etc. In this way, the consumer is assisted in obtaining the appropriate and safest ladder for his needs.

In addition, the Institute assisted the Office of Weights and Measures at the National Bureau of Standards in developing the proper kind of marking and dating of all ladders offered for sale in the various States and territories. This action had become necessary due to complaints filed by several States which complained of short measurements of ladders.

AMERICAN LEATHER CHEMISTS ASSOCIATION, Dr. Fred O'Flaherty, Secretary-Treasurer, c/o University of Cincinnati, Cincinnati, Ohio 45221

This Association, organized in 1903, is the technical society of the tanning and leather industry. Its membership consists of active and associate members and also subscribers to its Journal.

The Association has a number of technical committees which develop methods of analysis and testing. The final methods are published as the official methods of the Association. The American Leather Chemists Association and the American Society for Testing and Materials have a joint committee on the coordination of physical test methods. The ALCA is also a member of the International Union of Leather Chemists Society and it participates in the development of methods of international use.

The methods of ALCA, which are reviewed and amended as necessary, are incorporated in Industry specifications. Full cooperation is maintained with its members which include representatives from practically every Government agency concerned with leather or leather products. It is closely affiliated with the Tanners Council of America, the national trade association of the leather industry. The membership of ALCA includes members from the United States, Canada, Mexico, and 34 foreign countries.

AMERICAN LIBRARY ASSOCIATION, David H. Clift, Executive Director, 50 East Huron Street, Chicago, Illinois 60611

This Association has long been active in developing standards, both quantitative and qualitative, for library service, as shown by the following ALA publications: ALA Standards for College Libraries; ALA Standards for Junior College Libraries; Public Library Service: A Guide to Evaluation, with Minimum Standards; Costs of Public Library Service, 1963; Interim Standards for Small Public Libraries; Standards for Children's Services in Public Libraries; Standards of Quality for Bookmobile Service; Standards for Library Functions at the State Level; and Stan-

dards for School Library Programs. Another ALA standards publication is College and University Library Accreditation Standards. The Committee on Accreditation develops and formulates standards of education for librarianship.

ALA has also been a moving force in developing uniform codes for analyzing information and cataloging it.

The Association sponsors Sectional Committee Z85 of the United States of America Standards Institute, which has three subcommittees: No. 1 on Steel Bookstacks, No. 2 on Library Furniture, and No. 3 on Library Supplies. ALA's Library Technology Project is working through these three subcommittees to develop structural test strengths for wood furniture and steel shelving, performance standards for durability of finishes for steel shelving, and standards for library supplies.

The Library Technology Project conducts a continuing testing program of photocopiers, microfilm reader-printers, and other reproduction equipment. These evaluations are, in fact, preliminary steps in establishing performance standards for this type of equipment.

The Library Technology Project is also conducting a long-range project to develop performance standards for library binding through both laboratory use-testing and testing in the library.

AMERICAN LUMBER STANDARDS COMMITTEE, A. L. Agather, Chairman, Libby, Montana; James H. Carr, Jr., Secretary, 2138 P Street, N.W., Washington, D. C. 20037

This Committee is the successor to the Central Committee on Lumber Standards. It consists of 23 representatives of groups of lumber manufacturers, lumber inspection agencies, architects, engineers, contractors, home builders, wholesalers, retailers, mill-work manufacturers, and other consumers as well as 5 government agency representatives.

These representatives of all elements of the softwood lumber industry have in charge the maintenance of Simplified Practice Recommendation R16, Lumber, and its revision when necessary. The Committee's suggestions and proposed amendments, following general industry approval, appear in succeeding editions of these basic standards, as published by the National Bureau of Standards.

This Simplified Practice Recommendation sets forth the classifications, nomenclature, grading provisions, sizes, workings, description, measurement, tally, shipping, grade marking, and inspection provisions adopted voluntarily by the softwood lumber industry as the basis for individual grading rules covering the various species of softwood lumber as found in different areas of the United States.

In addition, the standards provide for the approval of inspection agencies and grading rules submitted to the Committee's Board of Review.

The recommendation was published initially in the year 1924 as a result of four general conferences of the industry, held in 1922, 1923, and 1924. In 1925, 1926, and 1928, the simplification pro-

gram was revised and amplified. In 1932 the shingles and moldings sections, only, were revised. This revision was published in 1933, as a separate booklet, supplementing Simplified Practice Recommendation R16-29. An edition was also published in 1939.

In 1949 the Committee was reconstituted as the American Lumber Standards Committee who immediately undertook the revision of the standards to their present form.

The latest standard, Simplified Practice Recommendation 16-53, was published January 15, 1953. This edition sets up the purpose, formation, and functions of the Committee and its Board of Review. It provides for Classification of American Standard Lumber, Standards for Grading, Standards for Grademarking, General Recommendations, Size Standards, and has appendices on nomenclature, definitions, and abbreviations. It also contains a brief history of lumber standardization and the then membership of the Committee.

The Committee was again reconstituted in 1965 with the membership being increased to give a broader representation. Present and future efforts are largely in the direction of improvements in lumber standardization and administration of the provisions of the standards.

AMERICAN MINING CONGRESS, J. Allen Overton, Jr., Executive Vice President, Ring Building, Washington, D. C. 20036

Standardization activities of this organization are currently carried on by its Coal Division, composed of coal-producing companies and manufacturers of mining equipment.

The following standards by the American Mining Congress, sponsored solely or in cooperation with other groups, have been approved by the United States of America Standards Institute as USA Standards: Safety code for installing and using electrical equipment in and about coal mines; coal mine tracks, signals, and switches; wire rope for mines; safety code for coal mine transportation, and specifications for roof bolting materials in coal mines.

AMERICAN MUTUAL INSURANCE ALLIANCE, Paul S. Wise, General Manager, 20 North Wacker Drive, Chicago, Illinois 60606

The standardization work of this organization pertaining to occupational safety and health, and traffic safety, is carried on with the United States of America Standards Institute of which it is a member body. It is officially represented on the USASI Board of Directors, Standards Council, Safety Standards Board, Highway Traffic Standards Board, Nuclear Standards Board, Conference of Member Bodies and over 65 technical sectional committees. The organization is Administrative Sponsor of the Safety Code for Portable Wood Ladders, Safety Code for Portable Metal Ladders, and Safety Code for Fixed Ladders. It is joint sponsor of the Safety Code for Laundry Machinery and Operations, and the Safety Code for Ladder Towers and Rolling Scaffolds.

In the fire safety field, all standardization work is carried on with the National Fire Protection Association of which the Alli-

ance is an organization member and is officially represented on the Board of Directors. This association is represented on approximately 15 NFPA technical committees engaged in the development of codes and standards in the fire prevention and fire protection fields. In addition, many member company engineers are members of NFPA technical committees in the name of their company or under a personal membership.

AMERICAN NUCLEAR SOCIETY, Octave J. Du Temple, Executive Secretary, 244 East Ogden Avenue, Hinsdale, Illinois 60521

The Standards Committee of this Society coordinates the activities of its several subcommittees in the preparation and promulgation of standards for the nuclear field, and represents the Society in activities with other organizations engaged in cooperative or similar activities. The activities of the subcommittees are indicated by their respective titles: ANS-1 Performance of Critical Experiments; ANS-2 Site Evaluation; ANS-3 Reactor Operations Technical Specifications; ANS-4 Reactor Dynamics and Control; ANS-5 Energy and Fission-Product Release; ANS-6 Shielding; ANS-7 Reactor Components; ANS-8 Fissionable Materials Outside Reactors; ANS-9 Nuclear Terminology and Reactor System Classifications; ANS-10 Standard Units in the Nuclear Industry; and ANS-11 Hot Laboratories and Specialized Equipment.

One USASI Standard, USA N6.1-1964 Safety Standard for Operations with Fissionable Materials Outside Reactors, has been published and 14 others are in various stages of preparation.

AMERICAN OIL CHEMISTS' SOCIETY, Carl H. Hauber, Executive Secretary, 35 East Wacker Drive, Chicago, Illinois 60601

This Society is a scientific organization concerned with basic research on animal, marine and vegetable oils and fats; with their extraction, refining, and use in consumer and industrial products; and with safety, packaging and quality control. The Society publishes the "Journal of the American Oil Chemists' Society," offering original research manuscripts from the aforementioned areas, often attributed to methodology. It also publishes the "Official and Tentative Methods of the American Oil Chemists' Society," a two-volume, loose-leaf set, annually amended by official "Additions and Revisions." In an effort to offer increased uniformity, this Society offers accurately tested and graded natural bleaching earth, activated bleaching earth, diatomaceous earth, salt crude glycerine, and aluminum moisture dishes, all designed for use with specific methodology. Sources of commercially available materials, instruments, and other products necessary to application of methodology is maintained. The Society sponsors Joint Committees with the American Society for Testing and Materials, Inter-Society Color Council, Association of Official Agricultural Chemists, and American Association of Cereal Chemists. Representation is maintained on committees of the American Association for the Advancement of Science, National Fire Protection

Association, National Research Council, USA Committees for ISO/TC 48 and ISO/TC 91, and the Advisory Board, Office of Critical Tables, National Academy of Sciences-National Research Council.

AMERICAN OPTOMETRIC ASSOCIATION, J. Harold Bailey,
Administrative Director, 7000 Chippewa Street, St. Louis, Missouri
63119 (Headquarters); 1026 17th Street, N. W., Washington, D. C.
20036

Originally organized in 1897, the Association today consists of over 13,500 optometrists. Its Committee on Standards guides the profession in developing minimum standards to be used in evaluating ophthalmic materials such as lenses and frames, and standardization of instruments and devices utilized in the clinical practice of optometry. In 1940 AOA resolved to promote lens standardization and urged the complete elimination of any lens of lower than first quality.

AOA members were instrumental in developing United States of America Standards Institute Standard Z80.1 covering Prescription Requirements for First Quality Glass Ophthalmic Lenses, approved in 1964. Replacing earlier standards, AOA adopted the USA Z80.1 standards in 1964. These standards cover the physical quality of ophthalmic lenses in appearance, refractive powers, refractive power addition, prism power, cylinder axis, segment size, segment location, thickness and lens size.

Coordinating its work with American lens manufacturers, the Association is active in developing appropriate base curves. AOA members, especially those in the military services, help develop Federal Government standards relating to eyewear including Federal Specification FF-S-620a.

AOA has adopted the standard boxing method of eye size specification as the approved method for specifying eye size. The Association urges all optical frame manufacturers to standardize frame markings to include the manufacturer's name, eye size, bridge size, overall temple lengths and to conform to the boxing method of marking. The Committee on Standards is authorized to take the necessary steps to study and recommend the establishment of standards of quality in the production of ophthalmic frames.

AOA coordinates its work with American lens, frame and equipment manufacturers, numerous governmental agencies and eye care organizations.

AMERICAN ORDNANCE ASSOCIATION, Major General W. K. Ghormley, U. S. A. (Retired), Executive Vice President, Transportation Building, 17th and H Streets, N. W., Washington, D. C. 20006

This Association has been actively engaged for 46 years in assisting the Department of Defense and, more recently, in cooperating with other Government agencies such as the National Aeronautics and Space Administration and Atomic Energy Commission, in the formulation of Government, Departmental and

Interdepartmental policy and procedure standardization activities.

Guided missiles, small arms, artillery and fire control equipment, tank and automotive equipment, ammunition of all types, aerospace vehicles, and the materials and components used in this equipment are included in the Association's areas of activity.

In addition, the Association has active technical divisions concerned with production equipment and techniques, and standards and metrology for the above commodities.

**AMERICAN PAPER INSTITUTE, Robert E. O'Connor, President,
122 East 42nd Street, New York, N. Y. 10017**

This Institute is the successor organization to the American Paper and Pulp Association and its Divisions, and the National Paperboard Association, having become fully operational with the completion in January 1966 of the organizational details relating to the merger of these several associations.

Because of the numerous grades of paper and paperboard designed for many different uses, the problem of standardization is very complex. However, over a period of years, physical standards as distinguished from quality standards have been developed in the case of many paper grades. The American Paper Institute will continue the interest of its predecessor organizations in this area.

Through representation on the standing committee for Simplified Practice Recommendation R22 on paper, the former American Paper and Pulp Association assisted in the revision of a standard schedule of basic paper sheet sizes for bond and writing papers, ledgers, looseleaf ledgers, machine posting ledgers, book paper (coated and uncoated), index bristol, and cover paper.

Standard gauge lists for boxboard grades of paperboard were adopted by members of the National Paperboard Association in May 1958. The standards, together with definitions and trade customs, are published in a booklet, "Boxboard Standards."

Although not directly related to standardization proper, the Dictionary of Paper, now in its third edition (1965), contains over 500 pages of concise descriptions of pulps, other raw materials, papers, paperboards, paper properties, and papermaking terms. The contents of this publication afford considerable guidance in the appraisal of paper grades, specifications, or standards.

Working in conjunction with the National Safety Council, the American Paper and Pulp Association also cooperated with the United States of America Standards Institute in the formulation of a safety code for pulp and paper mills.

**AMERICAN PETROLEUM INSTITUTE, F. N. Ikard, President,
and W. M. Wilson, Secretary, 1271 Avenue of the Americas, New
York, N. Y. 10020**

The principal activities of this Institute are simplification, standardization, and improvement of equipment and methods used by the petroleum industry. The fundamental purpose of this activity is to prepare and maintain standards and methods acceptable both

to the industry and to the manufacturers of the equipment. This purpose is accomplished through participation and cooperation of users and manufacturers in the development and keeping up to date of such standards and methods.

The Board of Directors is the governing body of the Institute and, as such, has authority to adopt, modify, or reject proposed API Standards and Recommended Practices. Responsibility for the major portion of the Institute's standardization work lies within its Divisions of Production and Refining, which were formed under a plan of organization adopted in 1929, and its Divisions of Transportation and Marketing, and Division of Science and Technology, established more recently.

In the Division of Production (William H. Strang, Director, 300 Corrigan Tower Building, Dallas, Texas) the authority to act on matters relating to material standards and recommended practices has been delegated by the Board of Directors, via the Division's General Committee, to the Executive Committee on Standardization of Oilfield Equipment. Standing committees, subcommittees, and task groups within the organization of and responsible to the Executive Committee, have developed and maintain 50 specifications, bulletins, and recommended practices covering the following: Belting, Cable Drilling Tools, Boilers, Derricks and Masts, Tubular Goods, Valves, Fittings and Flanges, Rotary Drilling Equipment, Hoisting Tools, Wire Rope, Oil Well Cements, Production Equipment, Lease Production Vessels, and Drilling Fluid Materials.

The standardization committees of the Division of Production have formal representation or informal liaison with numerous societies and associations, including the United States of America Standards Institute, American Society for Testing and Materials, American Welding Society, Manufacturers Standardization Society of the Valve and Fittings Industry, American Wellhead Equipment Manufacturers Association, Society of the Plastics Industry, American Gas Association, American Association of Oil Well Drilling Contractors, and many others.

The Institute grants to manufacturers, upon application and submission of a statement of qualifications, the right to affix its official monogram on material made in accordance with API standards. Application of the monogram constitutes a warranty by the manufacturer that he has complied with all of the conditions and specifications set forth in the publication covering material so marked. The Institute reserves the right to revoke authorization to use its monogram, for any reason satisfactory to the Board of Directors.

The Committee on Refinery Equipment of the Division of Refining (W. T. Gunn, Director, 1271 Avenue of the Americas, New York, N. Y. 10020) conducts a program of standardization dealing with various features of refinery equipment for petroleum refinery service. Recommended practices or standards have been published covering (1) Classification of Areas for Electrical Installations, (2) Inspection, Repair, and Rating of Unfired Pressure Vessels in Service, (3) Design and Installation of Pressure-Relieving Systems, (4) Testing Procedure for Pressure-Relieving

Devices Discharging Against Variable Back Pressure, (5) Flanged Steel Safety Relief Valves, (6) Commercial Seat Tightness of Safety Relief Valves with Metal-to-Metal Seats, (7) Safety Relief Valve Nameplate Nomenclature, (8) Calculation of Heater-Tube Thickness, (9) Electrical Installations, (10) Installation of Refinery Instruments and Control Systems, (11) Flanged and Butt-Welding-End Steel Gate and Plug Valves, (12) Compact Design Carbon Steel Gate Valves, (13) 150 lb., Light-Wall, Corrosion-Resistant Gate Valves, (14) Flanged Nodular Iron Gate and Plug Valves, (15) Centrifugal Pumps, (16) Mechanical-Drive Steam Turbines, (17) Centrifugal Compressors, (18) Reciprocating Compressors, (19) Design and Construction of Large, Welded, Low-Pressure Storage Tanks, (20) Tube and Header Dimensions for Fired Heaters, (21) Tube Dimensions for Heat Exchangers, (22) Heat Exchangers, and (23) Welded Steel Tanks for Oil Storage.

Projects underway include standards or recommended practices for Air-Cooled Heat Exchangers, High-Speed Gears, Gas Turbines, Process Steam Analyzers, Pressure Relief and Depressuring Systems, Valve Inspection and Testing, Venturi-Type Gate Valves, and Large Diameter Carbon Steel Flanges.

The Committee on Disposal of Refinery Wastes has published two collections of standard methods for analysis of (1) Waste Gases, and (2) Waste Waters.

Transportation equipment used by the petroleum industry is covered generally by Federal and State regulations, but the Division of Transportation (B. H. Lord, Jr., Director, 1101 Seventeenth Street, N.W., Washington, D. C. 20036) cooperates and assists in the preparation of such regulatory standards. In addition, the Division has fostered the development of standard methods of pipeline construction, maintenance, and operation.

Through its appropriate committees, the Marketing Division (A. J. Rumoshosky, Director, 1271 Avenue of the Americas, New York, N. Y. 10020) encourages the development of standards of materials, equipment (and equipment parts), packages, procedures and product applications which will facilitate competitive replacement, reduce unit costs, promote safe operation, and assist consumers in their identification of general classes of products appropriate for their requirements without limiting, however, the general freedom of choice and variety of approach characteristic of the marketing effort.

The Division of Science and Technology (E. O. Mattocks, Director, 1271 Avenue of the Americas, New York, N. Y. 10020) through its several committees has developed standards on Measuring, Sampling, and Testing Natural Gas; Measuring, Sampling, and Testing Natural Gasoline and Other Light Liquid Petroleum Hydrocarbons; Measurement of Petroleum Liquid Hydrocarbons by Positive Displacement Meter; Calibrating Tank Car Tanks and Measuring, Sampling, and Calculating Tank Car Quantities (Non-pressure-Type Tank Cars); Measuring, Sampling, and Calculating Tank Car Quantities and Calibrating Tank Car Tanks (Pressure-Type Tank Cars); Measuring, Sampling, and Testing Crude Oil; Crude Oil Tank Measurement and Calibration; Lease

Automatic Custody Transfer; Shop Testing of Automatic Liquid-Level Gages; Volumetric Shrinkage Resulting from Blending Volatile Hydrocarbons with Crude Oils; The Design and Construction of Liquefied Petroleum Gas Installations at Marine and Pipeline Terminals, Natural Gasoline Plants, Refineries, and Tank Farms; Tentative Methods of Measuring Evaporation Loss from Petroleum Tanks and Transportation Equipment; Evaporation Loss in the Petroleum Industry—Causes and Control; Evaporation Loss from Tank Cars, Tank Trucks, and Marine Vessels; Use of Plastic Foam to Reduce Evaporation Loss; Evaporation Loss from Low-Pressure Tanks; Evaporation Loss from Floating-Roof Tanks; Evaporation Loss from Fixed-Roof Tanks; Use of Internal Floating Covers for Fixed Roof Tanks to Reduce Evaporation Loss; and Mechanical Displacement Meter Provers. The Fire and Safety Committees have issued a great number of publications dealing with various phases of petroleum activities.

AMERICAN PHARMACEUTICAL ASSOCIATION, Dr. William S. Apple, Executive Director, 2215 Constitution Avenue, N.W., Washington, D. C. 20037

This Association, established in 1852, stated as its first objective: "To improve and regulate the drug market by preventing the importation of inferior, adulterated or deteriorated drugs and by detecting and exposing home adulterations." In 1888, the Association first published a formulary to standardize the formulas for widely used dosage forms and to establish generally accepted common names for these products.

In 1906, the original Federal Food and Drugs Act recognized the American Pharmaceutical Association's "National Formulary" as one of the two official drug compendia in the United States. Since 1906, the character of the standards in the "National Formulary" (N.F.) has changed drastically. The latest edition, N.F. XII, 1965, based the selection of drugs admitted to it solely on the criterion of therapeutic value. (For a complete description of this publication, see "National Formulary.")

The Association, through the "National Formulary," encourages the standardization of systems of weights and measures by utilizing only the metric system in expressing doses of drugs and in all references to linear, weight, and volume units.

AMERICAN PLYWOOD ASSOCIATION, James R. Turnbull, Executive Vice President, 1119 A Street, Tacoma, Washington 98401

This Association represents member mills manufacturing softwood plywood used extensively in construction applications. The Technical Services Division of the Association conducts research, engineering, testing and inspection functions, and is responsible for the development and publication of engineering standards.

In addition, the Association is sponsor of the nationally recognized Commercial Standards governing the manufacture of softwood plywood. These include CS45-60 for Douglas Fir, CS259-63 for Southern Pine, and CS122-60 for Western Soft-

wood Plywood. All of these standards were recently combined into one Product Standard PS1-66 for Softwood Plywood, Construction and Industrial, published by the Product Standards Section, National Bureau of Standards. By way of background, CS45 was first published in February of 1933; CS122 in November of 1944; and CS259 in November of 1963. Several revisions or amendments have since been made over the years to insure that the Standards are up to date technically, and that they represent current industry practice.

AMERICAN PUBLIC HEALTH ASSOCIATION, Berwyn F. Mattison, M.D., Executive Director, 1790 Broadway, New York, N. Y. 10019

A major contribution of this Association is the development of standards of procedure, personnel qualifications and practice. It publishes and continually updates Standard Methods for the Examination of Dairy Products; Standard Methods for the Examination of Water and Wastewater; and Standards for Healthful Housing. It publishes other works where standards are included, for example, Suggested Ordinance and Recommendations Covering Public Swimming Pools. The APHA has representatives on various boards of the United States of America Standards Institute and cosponsors USASI Sectional Committee A40 on Minimum Requirements for Plumbing. APHA's Committee on Professional Education has developed a series of Educational Qualifications for various kinds of public health workers as well as standards of accreditation for schools of public health. Its Professional Examination Service prepares examinations for Civil Service Departments, Merit System agencies and many licensing boards. APHA committees also develop publications on such diverse subjects as TB control, radiological health and chronic disease which serve as guides for practitioners, scientists, technologists, administrators and others concerned with public health problems.

AMERICAN PUBLIC WORKS ASSOCIATION, Robert D. Bugher, Executive Director, 1313 East 60th Street, Chicago, Illinois 60637

In 1937, the American Society of Municipal Engineers and the International Association of Public Works Officials were merged to form this Association. Standardization and simplification activities of this organization are carried on by various committees dealing with bituminous and concrete pavements, sewers, sidewalks and curbs, and subgrades and foundations. These committees are responsible for the preparation of standard specifications covering materials and construction methods which are adopted and published by the Association. Committees of this Association cooperate with similar committees of other technical organizations in the development of standards and specifications.

It is represented on committees of the American Society for Testing and Materials covering Committee C-1, Cement Materials; C-9, Concrete and Concrete Aggregates; and D-4, Road and Paving Materials. In addition, it is represented on United States

of America Standards Institute Committee A37, Road and Paving Materials and B58, Vertical Turbine Pumps. The Association is also a member of the Highway Research Board of the National Research Council.

AMERICAN RAILWAY ENGINEERING ASSOCIATION, E. W. Hodgkins, Executive Secretary, 59 East Van Buren Street, Chicago, Illinois 60605

This Association has two lives—one as a private association of individual railway engineers and maintenance of way officers and supervisors, the other as the entire Engineering Division of the Association of American Railroads, operating in that capacity under the Vice President, Operations and Maintenance Department.

In both of these capacities the AREA, through its numerous technical committees, maintains and keeps up-to-date by annual supplements the "Manual of Recommended Practice for Railway Engineering," with respect to railway engineering and maintenance of way and structures. These committees are continuously engaged in developing standards, specifications, test methods and recommended practices on the following main subjects which comprise the several sections or chapters of the Manual: Definition of terms, roadway and ballast, ties and wood preservation, rail, track, buildings, wood bridges and trestles, masonry, highways, engineering and valuation records, water, oil and sanitation services, yards and terminals, iron and steel structures, economics of railway location and operation, electricity, contract forms, economics of railway labor, waterways and harbors, maintenance-of-way work equipment and clearances.

In addition, the Association maintains and keeps up-to-date by the issuance of supplements the "Portfolio of Trackwork Plans," some units of which have been adopted in whole or in part as standard by some railroads, and the fixed-property portions of the "Electrical Manual of Standards and Recommended Practices."

The AREA, acting in both of its capacities, maintains representation on pertinent committees of a large number of national technical societies, associations and other organizations, as well as with several Government agencies. In the United States of America Standards Institute, the Executive Secretary, AREA, in his position as Executive Vice Chairman, Engineering Division, AAR, serves on the Standards Council for the entire AAR organization. In addition, representation is maintained on many USASI standards boards and sectional committees.

Within the American Society for Testing and Materials, the associations are represented on a number of technical committees engaged in the development of standard specifications and methods of testing. Other organizations with which the AREA collaborates in one or both of its capacities through representation in specific aspects of their work include the Institute of Electrical and Electronics Engineers, American Society of Civil Engineers, American Lumber Standards Committee, American Welding Society, American Iron and Steel Institute, American Concrete

Institute, Column Research Council, Edison Electric Institute, Engineering Foundation, Forest Products Research Society, National Association of Corrosion Engineers, National Bureau of Standards, Reinforced Concrete Research Council and Steel Structures Painting Council

AMERICAN ROAD BUILDERS' ASSOCIATION, Louis W. Prentiss, Maj. Gen., USA (Ret.), Executive Vice President, 525 School Street, S.W., Washington, D. C. 20024

The Association has, as a major objective, the fostering and encouraging of the full utilization of scientific and educational measures toward the accomplishment of an integrated national highway and airport system adequate to accommodate the growth and advancement of highways and air transportation necessary for the civil economy and the national defense.

Membership in the American Road Builders' Association, working through eight operating divisions, includes Federal, State, county, and city highway engineers and administrators as well as consulting engineers. It includes also highway contractors, producers of highway materials, manufacturers and distributors of highway machinery, banking and financing institutions, and educators in civil engineering colleges and universities.

Committees study problems relating to highway legislation, finance, design, construction, maintenance, equipment, and operation. All efforts are constantly directed toward development of improved standards to bring about utilization of new materials and eliminate waste and improper methods, thereby accomplishing greater economy in the highway and airport field.

Every effort is made to avoid duplication in areas of activity of other associations. The Association has cooperated and will continue to cooperate with other associations in joint activities. It has published numerous bulletins dealing with practical application of technical and semitechnical developments.

AMERICAN SOCIETY FOR ABRASIVE METHODS, Robert J. Werner, Staff Assistant, 330 South Wells Street, Chicago, Illinois 60606

This Society's Standing Committee is responsible for the formulation and development of standards for abrasives. It cooperates with the United States of America Standards Institute's Sectional Committee B74 on Abrasives, which is working on the development of identification and dimensional standards and standard test methods for bonded, coated, and loose abrasives in the natural and manufactured categories. The Society is also represented on Subcommittee No. 1 dealing with bonded abrasives and on Subcommittee No. 3 for diamond abrasives.

The Society also has a Survey Committee, the function of which is to determine presently practiced feeds, speeds, and stock removal rates for grinding and other abrasive operations.

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS, J. L. Butt, Executive Secretary, St. Joseph, Michigan 49085

This Society is composed of four main technical divisions: (1) Power and Machinery; (2) Farm Structures; (3) Electric Power

and Processing; (4) Soil and Water. Standards, recommendations, and data related to the interests of these four technical divisions may be generally classified as follows: (a) Drying, Processing, Storage, Handling of Feeds and Foods (Equipment and Practices and Design Data)—crops, milk, pelleting and wafering, psychrometry; (b) Electrical Equipment, Wiring, Practices—milk coolers and brooding equipment; (c) Soil and Water, Practices and Equipment—drainage, erosion control (terraces), irrigation; (d) Structures and Structural Equipment and Environment—fence, grain storage, livestock shelter ventilation and construction, poultry shelter ventilation and construction, psychrometry, silos; (e) Tractors, Machinery, Power Units and Components—machines, belt drives, controls, draft and power requirements, dryers, fasteners, fuel requirements, hitches, hydraulic controls, lighting, lubrication, power take-offs, pulleys, tires, tractors, wagons, wheels, and safety standards.

All ASAE Standards, Recommendations, and Data are published annually in "Agricultural Engineers Yearbook."

In addition to the standardization activities within the ASAE, this Society cooperates in standardization with the United States of America Standards Institute, American Society for Testing and Materials, Society of Automotive Engineers, American Society for Heating, Refrigeration, and Air-Conditioning Engineers, and various trade associations.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, John W. Andes, Executive Secretary, 515 Busse Highway, Park Ridge, Illinois 60068

This Society is the sponsor of United States of America Standards Institute Sectional Committee Z79 on Standards for Anesthesia Equipment. The work of this committee is devoted to: Terminology, definition, units of measure, identification, dimensions and tolerances, and methods of test of anesthesia and breathing machine connecting pieces—including breathing tubes, masks and bags—from the patient to the machine. The committee has produced Standard Specifications for Endotracheal Tubes Z79.1-1960, and Specifications for Endotracheal-Tube Connectors and Adaptors Z79.2-1961. In the final preparation stage are Specifications for Anesthesia Breathing Circuit Adapters and Sequence.

The American Society of Anesthesiologists has, in addition, a Committee on Equipment and Standardization which maintains liaison with the standardization work of other professional and technical bodies in the medical field.

AMERICAN SOCIETY OF BAKERY ENGINEERS, Bernard Bergholz, Jr., Secretary-Treasurer, Room 833, Riverside Plaza Building, 2 North Riverside Plaza, Chicago, Illinois 60606

Standards developed by this Society for bakery equipment concern capacity of equipment, dimensions of equipment which pertain to operating practices, and nomenclature for capacity. These standards are written in cooperation with the Bakery Equipment Manufacturers' Association. The United States of America Stan-

dards Institute Safety Code for Bakery Equipment (Z50-1947) was sponsored by the Society and is presently being reviewed.

The Society is an active participant in the Baking Industry Sanitation Standards Committee, which has published twenty-three standards for sanitary design of bakery equipment. These standards have been incorporated in the health code of many municipal regulatory agencies.

AMERICAN SOCIETY OF CINEMATOGRAPHERS, Ray Rennahan, Secretary, 1782 North Orange Drive, Hollywood, California 90028

The Research and Educational Committee of this Society is engaged in standardization activities on an interdepartmental basis within the motion picture industry.

The versatility and rapid expansion of present day wide screen motion picture production methods necessitate immediate standardization of procedures within the industry for methods, equipment and/or agreements on aperture dimensions. One example of the Society's work in this regard is ASC Recommendation No. 13, covering the newly developed Techniscope wide screen production method which is at present followed by all major studios throughout the world. This document sets forth technical facts as well as dimensions for camera aperture and ground glass and/or finder markings.

AMERICAN SOCIETY OF CIVIL ENGINEERS, William H. Wisely, Executive Secretary, 345 East 47th Street, New York, N. Y. 10017

The primary effort of ASCE in the field of standardization is channeled through the United States of America Standards Institute. Through representation on USASI committees and committees of other standards producing organizations, ASCE joins with other societies in the creation of "USA Standards." Such activities within ASCE are coordinated by an Administrative Committee on Standards.

The Society is represented on the United States of America Standards Institute Board of Directors, Conference of Executives of Organization Members, Standards Council, Construction Standards Board, Graphic Standards Board, Highway Traffic Standards Board, Nuclear Standards Board, and 22 USASI Sectional Committees. It is also represented on American Society for Testing and Materials Committees C-1 Hydraulic Cement, C-4 Clay Pipe, C-9 Concrete Aggregate, D-18 Soils for Engineering Purposes, and D-22 Methods of Atmospheric Sampling and Analysis. In addition, the Society is a member of the following committees: U. S. National Committees of International Standards Organization Technical Committees ISO/TC5 Pipes and Fittings, Subcommittee 6 Plastic Pipe and Fittings; and ISO/TC30 Fluid Flow, Subcommittee 1 Flow Measurements in Open Channels; Association of Iron and Steel Engineers committee on Development of Structural Steel Design Specifications for Heavy Mill Buildings; Building Officials Conference of America, Inc. Industrial Advisory Committee; and U. S. Department of Commerce, National Bureau of Standards, American Lumber Standards Committee.

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, Robert C. Cross, Executive Secretary, United Engineering Center, 345 East 47th Street, New York, N. Y. 10017

For over 72 years this Society has contributed standards vital to man's well-being and comfort—in office buildings, factories, school and home construction; in food and beverage processing, storage and distribution; in solar energy utilization; and, most recently, in the nation's space program.

Probably no ASHRAE activity or accomplishment has a more direct influence upon living conditions than its standards, established to assist industry and the general public by offering a uniform method of testing equipment for rating purposes, by suggesting safe practices in designing and installing equipment, and by providing proper definitions of equipment.

At present, the Society has available over 30 standards, the majority of them adopted during the past 25 years. These standards pertain to areas of interest of ASHRAE members, such as methods of testing home freezers and household refrigerators; a safety code for mechanical refrigeration intended to insure safe design, construction, installation, operation and inspection of systems using a fluid which is vaporized and normally liquefied in its cycle; method of testing room air conditioners; methods of testing drinking water coolers with self-contained mechanical refrigeration systems; recommended practice for mechanical refrigeration installation on shipboard; methods of testing bottled beverage coolers; methods of testing forced circulation, air-cooling coils (under nonfrosting conditions) and air-heating coils; designation of refrigerants; methods of testing desiccants for refrigerant drying; criteria for testing the measurement of sound power radiated from heating, refrigerating and air-conditioning equipment; methods of testing unitary heat pump equipment and heat operated unitary air-conditioning equipment for cooling; and methods of testing nonresidential warm air heaters. Six ASHRAE Standards have been approved as USA Standards.

ASHRAE Standards Project Committees are continually in the process of promulgating new standards, as well as reviewing current standards so that they will reflect technical advances in the areas which they cover. The Society sponsors nine United States of America Standards Institute projects, and Intersociety Representatives appointed by the Standards Committee have been active on these, as well as on fifty others. The Society is active on a number of projects of the International Organization for Standardization (ISO) and has taken the lead in submitting several standards for consideration as International Standards.

AMERICAN SOCIETY FOR HORTICULTURAL SCIENCE, Cecil Blackwell, Executive Director, 615 Elm Street, St. Joseph, Michigan 49085

This Society, founded in 1903, consists of educators and government workers engaged in research, teaching, or extension work in

horticultural science, as well as firms and associations interested in horticulture. It endeavors to promote and encourage national interest in scientific research and education in horticulture.

Three committees of the Society are particularly active in standardization related to the naming and description of varieties of vegetables and fruits. These include the Committees on Citrus Nomenclature, Fruit Breeding, and Vegetable Breeding and Varieties. The latter has full cooperation and support from the Garden Seed Variety Committee of the American Seed Trade Association.

The Society is represented on United States of America Standards Institute Sectional Committee K62 Common Names for Pest Control Chemicals, as well as its Council on Pesticide Application, which is devoting major efforts to developing uniform nomenclature and specifications as to physical properties and rates of application. The Agricultural Research Institute, in which the Society is also represented, is currently making studies of "Breeder's Rights," a proposed revision to the International Code of Nomenclature of Cultivated Plants, and International Certification of Varieties.

AMERICAN SOCIETY OF LUBRICATION ENGINEERS, Donald B. Sanberg, Executive Secretary, 838 Busse Highway, Park Ridge Illinois 60068

This Society develops and promulgates standards on industrial lubricants and lubrication practices. This activity began in 1962. Since then, standards on 10 machine tool lubricants, and practices involving the design of circulating oil systems for lubricating paper machine dryer roll bearings have been published. Additional standards are in the developmental stage.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, O. B. Schier II, Executive Director and Secretary, United Engineering Center, 345 East 47th Street, New York, N. Y. 10017

This is a professional society organized to promote the art and science of mechanical engineering and the allied arts and sciences; to encourage original research; to foster engineering education; to advance the standards of engineering; to promote the intercourse of engineers among themselves and with allied technologists; to promote a high level of ethical practice; and in cooperation with other engineering and technical societies to broaden the usefulness of the engineering profession.

The Society has professional activities in the following fields: Air Pollution, Applied Mechanics, Automatic Control, Aviation and Space, Diesel and Gas Engine Power, Energetics Group, Fluids Engineering, Fuels, Gas Turbine Power, Heat Transfer, Human Factors, Lubrication, Machine Design, Maintenance and Plant Engineering, Management, Materials Handling Engineering, Metals Engineering, Nuclear Engineering, Petroleum, Plant Engineering and Maintenance, Power, Pressure Vessels and Piping, Process Industries, Production Engineering, Railroad, Rubber and Plastics, Safety, Solar Energy Applications, Textile Engineering, and Underwater Technology.

The Society publishes "Mechanical Engineering" monthly and the "Mechanical Catalog" annually. The "Transactions of the ASME" is published in five quarterlies, viz: "Journal of Applied Mechanics," "Journal of Basic Engineering," "Journal of Engineering for Power," "Journal of Engineering for Industry," and "Journal of Heat Transfer."

The standardization activities of the Society have grown very rapidly during the past thirty years, until now about 3,500 engineers and others are serving on more than 400 committees for which the Society is sponsor or joint sponsor. In this work approximately 300 organizations cooperate.

The Society was one of the founders of the American Standards Association (now United States of America Standards Institute) and its predecessor group, and has placed nearly all of its dimensional, graphical, and safety projects under the USASI Procedure. The Society is sponsor or joint sponsor for 35 committees on standards for plumbing equipment; screw threads and screw thread gaging; pipe threads and pipe thread gaging; pipe and fire hose coupling threads; tolerances for cylindrical parts and limit gages; machine tools, components, elements, performance and equipment; gears; pipe flanges and fittings; keys, keyways and keyseats; bolts, nuts, rivets, screws and similar fasteners; washers and machine rings; transmission chains and sprocket teeth; steam, air, oil, chemical, gas and nuclear piping; wire sizes; steel piping and tube; pressure and vacuum gages; surface qualities; V-belts and their drives; industrial cooling towers; metallic storage and processing tanks for the chemical industry; calibration of instruments; dimensional metrology; splines and splined shafts; cutting tools and holders; terminology for pressure relief devices; industrial corundum bearings; automatic control terminology; pallets; freight, cargo and van containers; mechanical shock and vibration; letter symbols; abbreviations; drawings; drafting practice; graphic symbols; and industrial engineering terminology. In addition, the Society serves as sponsor or joint sponsor for 12 more committees dealing with the establishment of safety codes for identification of piping systems; elevators; manlifts, escalators and passenger elevators; mechanized parking garage equipment; power operated platforms for exterior building maintenance; mechanical power-transmission apparatus; compressor systems; conveyors and cableways; cranes, derricks and hoists; powered industrial trucks; aerial passenger tramways; and nuclear reactor safety standards. It also maintains representation on 87 other committees engaged in work on engineering standards. It has played an increasingly active part in the USA's efforts in international standardization in the field of mechanical engineering under the auspices of the International Standardization Organization (ISO) and International Electrotechnical Commission (IEC).

One of the Society's most notable technical committee accomplishments is the development of the ASME Boiler and Pressure Vessel Code, the last edition of which was issued in 1965. This code, which is divided into seven sections, contains rules for the construction of power boilers to be used in stationary service, miniature boilers, nuclear pressure vessels, heating boilers and unfired pressure vessels, as well as the care of power boilers in

service and rules for welding qualification. One section contains the specifications for the materials to be used in code construction. The Society also issues interpretations of these rules, including their application to nuclear power constructions.

The detailed specifications, formulas, tables of dimensions, diagrams and sketches in the code cover plates, tubes, piping, welded and riveted joints, domes, dished and flat heads, braced and stayed surfaces, stays, headers, access and nozzle openings, safety valves, gages, fittings and appliances, welding and welding qualification procedure.

Other recommendations apply to efficiency of joints, method for certifying safety-valve capacity, standard practice for making hydrostatic tests on a boiler pressure part, rules for existing installations, and for the approval of new materials under the code. Rules for nuclear reactor and nuclear containment vessels are also covered. Sample manufacturers' data report forms are also included.

In addition, there have been prepared and issued by the Society 32 power test codes, 2 supplementary codes, and 34 auxiliary sections of information on instruments and apparatus. These codes give standard directions for conducting acceptance tests and for determining the performance of power generating and using equipment.

AMERICAN SOCIETY FOR METALS, Allan Ray Putnam, Managing Director, Metals Park, Ohio 44073

This Society publishes the "ASM Metals Handbook," which contains over 300 articles or reports on the application, manufacture, fabrication, treatment, and testing of metals and alloys, both ferrous and nonferrous. These articles and reports have been prepared by individual authors and technical committees. In a large measure they point up recommended practices, or they summarize data that will be of value to groups working on standardization. The Society maintains representation on the Intersociety Corrosion Committee of the National Association of Corrosion Engineers, and the Joint Committee on Definitions of Heat-Treatment Terms. This committee reports jointly to the American Foundrymen's Association, American Society for Metals, American Society for Testing and Materials, and Society of Automotive Engineers.

AMERICAN SOCIETY OF PHOTOGRAMMETRY, C. E. Palmer, Secretary-Treasurer, 105 North Virginia Avenue, Falls Church, Virginia 22046

The Society publishes a Manual of Photogrammetry. The Third Edition, published in February 1966, presents a comprehensive collection of practical operating instructions and engineering fundamentals of photogrammetry. It includes references to important applications of the science as currently practiced in the United States, with chapters on Photogrammetry in the Space Age and Radargrammetry. Of primary importance is the fact that it provides, for the use of professional workers in photogrammetry, the

standard or current American practices for the construction of maps including large scale engineering type plans, standard topographic quadrangles, and small-scale reconnaissance and planning charts.

A Manual of Photographic Interpretation, published by the Society in 1960, is another authoritative reference work which presents the theory of photo-interpretation as well as procedures for use in geology, soils, engineering, hydrology, archaeology, urban area analysis, agriculture, forestry, geography, and range management. The Manual is profusely illustrated and is a complete text for use in the field and for training purposes.

The Official Journal of the Society entitled "Photogrammetric Engineering," is presently published bimonthly. It contains technical articles and information on research, methods, equipment, specifications, costs, etc., for mapping, highway work, geologic investigation, forestry, agriculture, multiband photography, spectrazonal photography, soils and other uses.

AMERICAN SOCIETY FOR QUALITY CONTROL, Charles A. Bicking, Executive Secretary, 161 West Wisconsin Avenue, Milwaukee, Wisconsin 53203

As the professional organization in the quality control field, ASQC has been active in developing and publishing standards since its organization in 1946. It assumed cognizance of American War Standards Z1.1 and Z1.2-1941 on Guide for Quality Control and Control Chart Method of Analyzing Data, and Z1.3-1942 for Control Chart Method of Controlling Quality During Production, and obtained the consensus leading to their adoption as American Standards in 1958 (now USA Standards). The Society's Standing Committee on Standards has published the following standards: A1-1951 Definitions and Symbols for Control Charts; A2-1962 Definitions and Symbols for Acceptance Sampling by Attributes; A3-1964 Glossary of General Terms Used in Quality Control; B1 and 2-1958 same as Z1.1 and Z1.2-1958, and B3-1958 same as Z1.3-1958.

The scope of the Standards Committee is as follows: It shall keep under continuing observation those concepts, symbols, nomenclatures, terms, definitions, and procedures in use by quality control engineers; shall select, following study of these and similar matters, those items which, in its opinion the Society would find advantage in standardizing; and shall make recommendations in due course to the Board of Directors for such standardization by the Society.

AMERICAN SOCIETY OF SAFETY ENGINEERS, A. C. Blackman, Secretary and Managing Director, 5 North Wabash Avenue, Chicago, Illinois 60602

The Society is composed of career safety specialists, organized to promote and foster the increase of knowledge of accident causation and control, and to maintain high standards in the profession.

Standards activities are under the supervision of the Standards Committee. The Society channels its standardization activities

through the United States of America Standards Institute, being represented on some 60 sectional committees. The Standards Committee has 12 Technical Review Subcommittees composed of individuals particularly knowledgeable in various subjects. The Technical Committees are Electrical and Electronic Standards; Building Standards; Material Handling Standards; Pressure Vessel Standards; Statistical Standards; Personal Protective Equipment Standards; Machine and Guarding Standards; Fire Protection and Prevention Standards; Elevator, Escalator, and Manlift Standards; Above Floor Level Equipment Standards; Chemical, Radiation and Industrial Hygiene Standards; and Motor Vehicle and Highway Standards.

AMERICAN SOCIETY OF SANITARY ENGINEERING, Sanford Schwartz, National Secretary, 228 Standard Building, Cleveland, Ohio 44113

This Society was established in 1906 primarily for the purpose of promoting health, welfare and safety of the public through better sanitary principles as related to plumbing. The Society has endeavored to develop rules and regulations for the advancement of sanitary science in plumbing, encourage standardization and project the need for practical and scientifically developed plumbing installations. As a help to both manufacturers and local officials, the ASSE established the Seal Program. This Seal, displayed on a product, will indicate that the product has been tested and certified for compliance with a standard having the consensus of manufacturers of that class of product and is acceptable to the ASSE. Standards developed thus far are: #1001, Pipe Applied Atmospheric Type Vacuum Breakers; #1002, Water Closet Flush Tank Ball Cocks; and #1003, Water Pressure Reducing Valves for Domestic Water Supply Systems. The Standards Committee is presently working to develop standards for products relating to plumbing and sanitation.

AMERICAN SOCIETY FOR TESTING AND MATERIALS, T. A. Marshall, Jr., Executive Secretary, 1916 Race Street, Philadelphia, Pennsylvania 19103

This is a national nonprofit, technical, scientific and educational society of over 13,000 members, founded in 1898 and formally incorporated in 1902 for the purpose of "the promotion of knowledge of the materials of engineering, and the standardization of specifications and the methods of testing."

The Society's work concerns primarily standardization and research in materials. It is, and has been for more than 65 years, specifically interested in the quality and tests of materials and only indirectly does it become involved in design problems, dimensional standards, and related matters.

As of June 1965, 3700 standard specifications, methods of tests, and definitions were in effect and hundreds of research projects were under way involving some 13,500 of the country's leading engineers, scientists, research workers and educators. All of this activity is of tremendous import to American industry, municipal,

State, and the Federal governments and other bodies and nations. Its standards and other activities are used throughout the world.

Membership. Of the 13,000 regular members of the Society, about 2,600 are corporate memberships and the balance are individual members or Federal, State, and municipal departments; universities and technical schools; or, technical societies and libraries. Not included in this field are upward of 1,100 student members at leading technical schools. Over 400 companies support the Society through sustaining memberships by contributing dues which are higher than for the regular type of company membership. About 15 percent of the membership is from outside of the United States.

In addition to members of the Society, there are about 8,100 other individuals who are active in the Society's committee work, representing various companies which are members of the Society. Thus, all told, there are about 21,100 members, committee members and students.

Purpose and Activity. In both phases of activity, standardization and research, the ASTM standing technical committees occupy a most important position. It has been rightly said that these committees are the heart of ASTM. An understanding of their organization and how they function in relation to the parent society is essential.

At the outset it should be stated that the activity is of a cooperative nature, and all members of the committees serve voluntarily. The committees function under definite regulations, governing the personnel and methods of procedure. Each committee is made up of three main classes of membership—producers, consumers, and general interests. This latter class comprises independent authorities who have expert knowledge of the materials to be studied, but who are not concerned directly with their production or use. The "producer" group may not predominate in any committee. It is recognized that no specification covering the quality and methods of testing a material or product will come into wide usage unless it is satisfactory to both the consumer and producer. The ASTM setup is thus fundamental in its standardization procedure, whereby the producers and consumers of materials are brought together on an equal footing.

Standardization Procedure. Proposed standards or revisions of existing standards originate in the committee having jurisdiction in that particular field. After detailed study and work involving methods of determining properties of materials, nomenclature, etc., a proposed standard is evolved which is submitted at a meeting of the committee. Actions affecting the proposed standard are subject to a two-thirds letter ballot vote of the entire committee. If accepted by the Society, the specification or test method is published as tentative for a year or more to elicit criticism and comments of which due cognizance is taken before the committee recommends that the tentative document be adopted by the Society as standard. Each standard before adoption is submitted to letter ballot vote of the entire Society membership and a two-thirds favorable vote of those voting is necessary before adoption.

Research, Knowledge of Materials. Obviously, research and standardization go hand in hand. C. B. Dudley, the Society's first

president, and a pioneer in the development of specifications, after enumerating certain requirements of a workable specification for material, states that "above all it should embody within itself the results of the latest and best studies of the properties of the materials which it covers." Early recognition of this fact and its continued recognition through the years undoubtedly have contributed more basically than any other factor to the wide use and established authority of the Society's standards.

Painstaking investigation and study of experience accumulated over years of service are often required before an adequate specification can be prepared. Agreement must be reached on the properties of materials to be specified and methods of testing them. Due cognizance of manufacturing details, methods of inspection, and marking, should be given.

The Society sponsors research in different ways, but primarily through the extensive activities of its many standard and research committees. These are correlated by an Administrative Committee on Research. This group also has charge of the Research Fund from which contributions are made as the need arises to further worthy research projects.

An important factor also is the opportunity afforded technical and research investigators to give results of their work in papers at ASTM meetings. Each year many such contributions containing important data and information on the properties of materials and their testing are published. This activity is a vital factor in the continuing education of engineers and scientists concerned with materials.

Cooperation With Other Groups and the Federal Government. The Society recognizes the value and importance of cooperating with other organizations both in standardization and in research activities wherever a common interest exists. Accordingly, the Society has joined with other national bodies in a great many investigative movements. These frequently take the form of joint committees. A phase of cooperation which the ASTM believes is most important in advancing the knowledge of engineering materials, is the joint sponsorship with other groups of symposiums held on important engineering topics. The Society has cooperated with such bodies as the American Society of Mechanical Engineers, American Foundrymen's Society, Society of Automotive Engineers, American Society of Civil Engineers, Soil Science Society of America, and many others.

Among other societies and activities in which the Society is officially represented are the following: National Research Council, Engineering Foundation, American Society for Metals, American Ceramic Society, American Welding Society, Inter-Society Color Council, Engineers Joint Council, and others.

The Society, one of the five originators of the American Standards Association, (now United States of America Standards Institute), a clearinghouse for standardization activities, is the sole or joint sponsor of many USASI projects and more than a third of the standards approved by USASI were developed and published by the Society.

Numerous divisions of the Federal Government cooperate closely with the Society and its technical committees, and the

assistance rendered by the Federal Government and by various branches of the State and municipal governments, in particular highway departments, is invaluable. Particular mention should be made of the cooperation of the National Bureau of Standards and its personnel. The latter is a relatively large group of scientists and engineers of broad training and experience concerned especially with developing factual information on many problems related to materials, and as such bring to the large number of ASTM technical committees on which they are active, an invaluable background. The Bureau personnel is the largest "general interest" group in the Society.

The Bureau of Mines, Public Roads Administration, Forest Products Laboratory, Bureau of Reclamation, Department of Defense, and other Federal departments have rendered much service. All of these groups, of course, receive benefits from this work—many ASTM standards are used by the Federal Government; the Society by publishing various technical contributions from the Federal Government helps disseminate knowledge.

Service branches of the Federal Government are active in ASTM work, the Army, Navy, and Air Force, being represented on committees; they help with various research projects and are vitally concerned with the requirements in ASTM specifications and tests.

Marking Requirements in ASTM Standards. Many of the ASTM specifications require that the products covered shall be marked or identified as to name or brand of the manufacturer, kind of material (in case of different grades or classes), certain testing information (hydrostatic test pressure, in case of pipe), and the ASTM serial designation identifying the specific standard.

Publications. The methods of publishing standards and the very widespread distribution of these publications aid greatly in facilitating their use. For ease of reference the standards are published in collective form and each is also issued in separate pamphlet form. Of predominant interest is the "Book of ASTM Standards." Each of its present 32 parts is published annually in various months of the year. A listing of their titles will give some idea of the tremendous breadth of the Society's interest in materials. Part 1 on Steel Piping Materials; Part 2 on Ferrous Castings; Part 3 on Steel Sheet, Strip, Bar, Rod, Wire, Chain, and Springs; Wrought Iron Bar and Sheet; Metallic Coated Products; Part 4 on Structural Steel, Concrete Reinforcing Steel; Boiler and Pressure Vessel Plate; Steel Rails, Wheels, and Tires; Bearing Steel; Steel Forgings; Ferrous Filler Metal; Ferro-Alloys; Part 5 on Copper and Copper Alloys (including Electrical Conductors); Part 6 on Light Metals and Alloys (including Electrical Conductors); Part 7 on Nonferrous Metals and Alloys (including Corrosion Tests); Die-Cast Metals; Electrodeposited Metallic Coatings; Metal Powders; Nonferrous Filler Metal; Part 8 on Magnetic Properties; Metallic Materials for Thermostats and for Electrical Resistance, Heating, and Contacts; Materials for Electron Devices and Microelectronics; Part 9 on Cement; Lime; Gypsum; Part 10 on Concrete and Mineral Aggregates; Part 11 on Bituminous Materials for Highway Construction, Waterproofing, and Roofing; Soils; Skid Resistance; Part 12 on Mortars; Clay and Concrete Pipe and Tile; Masonry Units; Asbestos-Cement Products; Building Stone;

Part 13 on Refractories; Glass, Ceramic Materials; Part 14 on Thermal Insulation, Acoustical Materials; Joint Sealants; Fire Tests; Building Constructions; Part 15 on Paper; Packaging; Cellulose; Casein; Flexible Barrier Materials; Leather; Part 16 on Structural Sandwich Constructions; Wood; Adhesives; Part 17 on Petroleum Products—Fuels, Solvents, Engine Tests, Burner Fuel Oils, Lubricating Oils, Cutting Oils, Lubricating Greases, Hydraulic Fluids; Part 18 on Petroleum Products—Measurement and Sampling, Liquefied Petroleum Gases, Light Hydrocarbons, Plant Spray Oils, Sulfonates, Crude Petroleum, Petrolatum, Wax, Graphite; Part 19 on Gaseous Fuels; Coal and Coke; Part 20 on Paint, Varnish, Lacquer, and Related Products—Materials Specifications and Tests; Naval Stores; Industrial Aromatic Hydrocarbons; Part 21 on Paint, Varnish, Lacquer, and Related Products—Tests for Formulated Products and Applied Coatings; Part 22 on Sorptive Mineral Materials; Soap; Engine Antifreezes; Wax Polishes; Halogenated Organic Solvents; Part 23 on Industrial Water; Atmospheric Analysis; Part 24 on Textile Materials—Yarns, Fabrics, General Methods; Part 25 on Textile Materials—Fibers, Tire Cords, Felts, Nonwoven Fabrics, Floor Coverings, Zippers; Part 26 on Plastics—Specifications (with Closely Related Tests); Part 27 on Plastics—General Methods of Testing; Part 28 on Rubber; Carbon Black; Gaskets; Part 29 on Electrical Insulating Materials; Part 30 on General Testing Methods; Fatigue; Statistical Methods; Appearance Tests; Temperature Measurement; Effect of Temperature; Part 31 on Metallography; Nondestructive Testing; Radioisotopes and Radiation Effects; Industrial Chemicals; Emission, Absorption, and Mass Spectroscopy; and Part 32 on Chemical Analysis of Metal; Sampling and Analysis of Metal Bearing Ores.

In addition to these there are several hundred adjuncts to the "Book of ASTM Standards." These are comparison standards that cannot be included in the book and must be made available independently. They include such things as reference photographs for metallic grain size and microstructure, for appearance of cotton yarns, for paint blistering, for inclusions in steel and for magnetic-particle indications of faults in metals. They include actual specimens of mica for grading visual and electrical quality, and sets of aluminum strips on which have been lithographed colors typical of the corrosion products on copper after exposure to gasoline and other fuels. They include replicas of the color standard to determine the thermal stability of aviation turbine fuels.

A yearly index to ASTM standards, including tentative standards, is published and distributed without charge. This publication covering some 250 pages gives under appropriate key words the titles of the standards together with the page and full reference to the ASTM publications in which they appear.

A great many of the Society's standards are reprinted by industrial companies and are used in textbooks and reference publications. Permission to reprint is frequently given; however, the Society has invoked a modest charge for the right to reprint standards when the published material is used for commercial purposes.

Especially notable has been the widespread use of ASTM stan-

dards in various building codes such as those recommended by the Building Officials Conference of America, Inc., Southern Building Congress, American Insurance Association, (formerly National Board of Fire Underwriters), International Building Officials Conference, the codes issued by New York City, Chicago, Boston, and others. The Materials Section of the Boiler Code Committee of the American Society of Mechanical Engineers is based on ASTM specifications. There are numerous other related ways in which ASTM specifications are used.

The Society's technical magazine, "Materials Research & Standards," is published monthly and is effective in promoting the knowledge of the Society's activities and stimulating the use of its specifications and tests. Through numerous meetings, the Annual Meeting and Committee Week of the Society and various local and national meetings, the importance of standardization is stressed. Mention should be made of the close cooperation of a great many technical and business journals that, with knowledge of the essential nature of the Society's work, include technical articles and news accounts of the progress in the field of engineering materials where ASTM functions.

AMERICAN SOCIETY OF TOOL AND MANUFACTURING ENGINEERS, John W. Groomes, General Manager, 20501 Ford Road, Detroit, Michigan 48128

The Society's National Standards Committee encourages and promotes the critical review of existing standards and the development and proposal of new standards by its chapters.

Company manufacturing and product standards are part of the daily life of ASTM members. National standards, where available, are most helpful to members involved in the many aspects of tooling and manufacturing. The continual extension and improvement of those standards are of vital concern to this 40,000-member Society.

ASTME acts as a clearinghouse between its chapters and the United States of America Standards Institute, of which the Society is a member. ASTME is represented on twenty-three USASI Committees covering such areas as B5 Small Tools and Machine Tool Elements; B6 Standardization of Gears; B11 Safety Code for Presses; and B17 Keys and Keyways. The Society sponsors five USASI Sectional Committees: B52 Classification of Materials for Tools, Fixtures and Gages; B67 Industrial Diamonds; B87 Decimal Inch; B98 Tooling Nomenclature; and Z75 Scales for Use with Decimal Inch Measurement, and is represented on the USASI Standards Council; Graphic Standards; Mechanical Standards; and Information Processing Systems Boards. It also holds membership in the Canadian Standards Association and the Standards Association of Australia.

AMERICAN SOYBEAN ASSOCIATION, George M. Strayer, Executive Vice President and Secretary-Treasurer, Hudson, Iowa 50643

This Association is the nationwide organization of soybean producers, and is particularly concerned with standardization of

grades for soybeans and soybean products, both for domestic sale and sale into the export markets. Because the United States is by far the largest shipper in world markets, it is necessary that buyers and handlers in other countries of the world understand the standards established on U. S. beans. The Association's major activity, therefore, is in the field of grading standards for soybeans, where it works closely with the Grain Division of the Department of Agriculture. For example, the Association is presently engaged in negotiations which will result in the establishment of a special export grade, designed for food manufacturers in various countries who want a quality of soybeans higher than that provided in the current Federal grading standards.

The Association also has a direct interest in the standards established for 41% protein soybean meal, 44% protein soybean meal, 50% protein soybean meal, soy flour, soy grits and the various types of soybean oil. Since U. S. soybeans and soybean products are relatively new commodities in the world markets, there is the problem of acquainting buyers with U. S. grading standards, establishing grading standards which are practical from our standpoint and from those of the buyer, and of changing the standards when it is deemed desirable.

AMERICAN SPICE TRADE ASSOCIATION, Stewart P. Wands, Executive Vice President, 76 Beaver Street, New York, N. Y. 10005

This Association maintains a Standards Committee whose function it is to adopt standards of qualities for whole spices, seeds, and herbs imported at American ports of entry. Through the Spice Grinders and Processors Section, the Association sponsored the movement for a simplified schedule of stock sizes of tin and silver spice containers which led to the establishment of Simplified Practice Recommendation R170-38, published by the National Bureau of Standards.

The Association has developed a publication known as "Official Analytical Methods" for analyzing spices. These methods, developed by the Association's Research Committee in conjunction with the Eastern Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture, contain 12 general methods for analyzing spices and 9 methods for analyzing specific spices.

AMERICAN SPROCKET CHAIN MANUFACTURERS ASSOCIATION, Lester E. Stybr, Executive Director, 819 South Aldine Avenue, Park Ridge, Illinois 60068

This organization is interested in standardization of dimensions of roller, silent, engineering steel and malleable iron chains, sprockets and wheels for the purpose of securing interchangeability, and also in standard recommendations for power capacity and speed of these chains. Subcommittees of engineers are appointed from time to time to deal with specified subjects, and their work is reviewed and approved by the entire Association. The Association, itself, does not publish standards, preferring to sponsor standards for adoption through the procedure of the

United States of America Standards Institute. It cooperates with the American Society of Mechanical Engineers, Society of Automotive Engineers, American Petroleum Institute, Conveyor Equipment Manufacturers Association, and the American Gear Manufacturers Association in standardization matters of mutual interest. In cooperation with some of these organizations, the Association has secured the adoption by the United States of America Standards Institute of the following standards: B29.1-1963; B29.2-1957; B29.3-1954; B29.4-1954; B29.5-1954; B29.6-1962; B29.8-1958; B29.9-1950; and B29.10-1962.

AMERICAN TRUCKING ASSOCIATIONS, Ray G. Atherton,
General Manager, 1616 P Street, N.W., Washington, D. C. 20036

This organization has developed and published two Recommended Equipment Specifications which have been adopted by the Society of Automotive Engineers. The first is ATA Specification E-1-1961 entitled "Electrical Connector for Truck Trailer Jumper Cable, including Cable Plug, Trailer Socket and Uniform Wiring Pattern." This specification covers the details, dimensions and design of the parts of both cable plug and trailer receptacle which must mate together properly to permit interchangeable use of different makes of connectors. Also included is a uniform wiring pattern for trailer electrical circuits and their connection to specific contacts in the connector socket and cable plug.

The second specification which this organization publishes is ATA Specification E-3-1961 for "Electrical Lighting and Wiring for Commercial Vehicle Bodies." This covers the details, dimensions and design of all the lamps and reflectors which are to be used on all truck, semitrailer or full trailer bodies. The second section covers the details, lengths, gage and diagram of the wiring for the lamps to provide standardization and ease of maintenance for truck and trailer lighting.

AMERICAN VENEER PACKAGE ASSOCIATION, Alvin A. Voges,
Secretary-Manager, 1225½ North Orange Avenue, Orlando, Florida 32804

The majority of products represented by this Association are subject to the U. S. Container Acts of 1916 and 1928 as to the size and shape. Accordingly, specification limitations have been developed in cooperation with the National Container Committee, AAR.

The Association maintains a standing committee on Standards and cooperates with organizations and Government bodies concerning matters relating to standardization of containers, particularly to fruit and vegetable baskets, hampers, and crates.

AMERICAN VETERINARY MEDICAL ASSOCIATION, H. E. Kingman, Jr., Executive Secretary, 600 South Michigan Avenue, Chicago, Illinois 60605

The standardization activities of this Association are vested primarily in the Council on Biological and Therapeutic Agents. The duties of the Council are: (1) Study the prophylactic and therapeutic merits of the various biological products employed in

the practice of veterinary medicine; (2) study the merits of proprietary pharmaceutical preparations employed in the practice of veterinary medicine; (3) cooperate with the Food and Drug Administration of the Federal Department of Health, Education and Welfare, and the Agricultural Research Service of the U. S. Department of Agriculture in removing undesirable products from the drug and food markets; and (4) cooperate with other groups in the medical profession engaged in similar activities.

AMERICAN WALNUT MANUFACTURERS ASSOCIATION,
Donald H. Gott, Executive Director, 666 North Lake Shore Drive,
Chicago, Illinois 60611

This Association cooperates in the development of rules for grading American walnut lumber which are published by the National Hardwood Lumber Association and the Hardwood Plywood Manufacturers Association in its rules for measurement and inspection of hardwood lumber, veneers, thin lumber and plywood. These grading rules are in general use, not only in the United States but also in foreign countries.

AMERICAN WAREHOUSEMEN'S ASSOCIATION, Donald E.
Horton, Executive Vice President, 222 West Adams Street, Chicago,
Illinois 60606

Since its founding in 1891, the Association has had an active interest in standardization programs affecting the industry. It recently revised the Standard Contract Terms and Conditions for Merchandise Warehousemen that have been widely used since 1926.

Suggested accounting and cost control practices for the industry have been evolved over years of study by AWA committees. An extensive Standardized Documentation and Office Procedures Program has been developed that provides standard procedures and documentation compatible with all currently produced data processing and mechanized office equipment.

AWA is represented on the General Storage Committee of the National Fire Protection Association which develops recommendations on fire protection standards for storage facilities.

AMERICAN WATCHMAKERS INSTITUTE, Hugh G. Wales, Executive Director, 608½ East Green Street, Champaign, Illinois 61822

The United States Government, through the military, has begun a program to standardize jewel bearings in timepieces utilized by the Armed Services. This involves a consensus from jewel manufacturers, procurement officials and other interested elements within the watch industry. The American Watchmakers Institute is represented in all of the conferences that are held to establish these standards.

In addition, this Institute serves in an advisory capacity to the British Standards Institution in connection with their project to standardize definitions in regard to movements which use jewels. The specific location of the jewels in pin lever and jewel lever

movements is critical, and the British Standards Institution is attempting to establish standards for the type of movement and the location of the jewels therein. Ultimately, these standards may be used on an international level.

**AMERICAN WATER WORKS ASSOCIATION, Raymond J. Faust,
Executive Secretary, 2 Park Avenue, New York, N. Y. 10016**

The Committee on Standardization, operating under a procedure adopted by the Board of Directors, produces documents that may, with appropriate modifications, serve as contract specifications for the purchase of materials or services; and compilations of basic data, usually of a design nature, concerning materials or services, which may assist a purchaser to prepare contract specifications. The Standardization Committee appoints such subcommittees as it may deem necessary to properly carry on its work.

There are currently 69 Standards, covering such items as deep wells; filtering materials; chemicals for softening, disinfection, coagulation, scale and corrosion control, taste and odor control, prophylaxis; cast iron pipe; steel pipe; concrete pipe; asbestos-cement pipe; valves and hydrants; pipe laying; water meters; steel water tanks; and vertical turbine pumps.

Task Groups in the Divisions of the Association are actively engaged in experimental use and testing of materials and products. The work done and data developed by the Task Groups frequently result in the formation of working committees to prepare new standards for equipment, materials or procedures.

The Association maintains representation on numerous committees of certain other technical organizations. The Association sponsors United States of America Standards Institute Sectional Committee B58 on Vertical Turbine Pumps, and is co-sponsor of the USASI Sectional Committee A21 on Cast-Iron Pipe and Fittings. The Association has official representation on other USASI Sectional Committees for such things as scheme for identification of piping systems, national plumbing code, dimensional standardization of plumbing equipment, pipe threads, pipe flanges and fittings, plastic pipe, industrial cooling towers, heat exchangers, storage and handling of anhydrous ammonia, abbreviations, letter symbols, method of recording and measuring work injury experience, fluid permeation, etc.

In cooperation with committees of the American Public Health Association and the Water Pollution Control Federation, a committee of this Association assists in the preparation—and revision every five years—of the publication, "Standard Methods for the Examination of Water and Wastewater," which is now in its 11th edition.

It cooperates with committees of the National Fire Protection Association on hydrants, valves, pipe fittings, public water supplies for fire protection, and on standpipes and outside protection.

The Association, in cooperation with the Municipal Finance Officers Association, is starting to completely rewrite the Manual of Water Works Accounting which was originally produced by the two Associations.

AMERICAN WAX IMPORTERS AND REFINERS ASSOCIATION,
R. E. Sievert, President, 225 West 34th Street, New York, N. Y. 10001

The Association was formed for the purpose of establishing and maintaining a cordial and friendly relationship among the members, and by united and cooperative effort to develop, promote and protect the interest of the industry.

It has established specifications, sampling and test methods for Carnauba, Candelilla and Ouricury Waxes together with color standards for Carnauba Wax.

AMERICAN WELDING SOCIETY, Fred L. Plummer, Executive Director, 345 East 47th Street, New York, N. Y. 10017

The technical committees of this Society prepare standards such as codes, specifications, recommended practices and technical reports. The standards emanating from these committees represent four broad categories: (1) Welding Fundamentals—including symbols, testing, definitions, filler metals, and safety; (2) Welding Processes—including resistance welding, metallizing, brazing and soldering; (3) Inspection of Welds, and Qualification of Welders and Procedures; and (4) Industrial Applications of Welding—pertaining to buildings, bridges, ships, storage tanks, automotive, piping, and aerospace. The technical committees are composed of approximately 700 experts from the academic community and industry, including producers and consumers, to ensure that the standards reflect the best industrial practices. Symposiums and technical meetings may be held to gather information for standards. At present, the Society has published more than 60 standards. The Society cooperates with other organizations in the preparation and review of standards if they include welding.

The Society is also involved in the preparation of standards on the international level. As an active member of Commission VII of the International Institute of Welding, liaison is maintained with the ISO committee on welding. The Society acts as technical advisor to the American representation on the IEC Committee on Welding.

AMERICAN WOOD-PRESERVERS' ASSOCIATION, John D. Ferry, Secretary-Treasurer, 839 Seventeenth Street, N.W., Washington, D. C. 20006

This Association, in its sixty-second year, has among its principal objectives the standardization of specifications for wood preservatives and their introduction into the materials to be preserved, and the improvement of materials and methods used in construction with preserved wood. In carrying out its aims, the Association has published and keeps current fifty-one standards covering preservatives, treatment of commodities, analysis methods, conversion tables and other miscellaneous standards. These standards are contained in the Association's "Book of Standards." The standards are referenced in State and Federal Specifications and are widely used throughout the using and producing fields of the industry.

AMERICAN ZINC INSTITUTE, John L. Kimberley, Executive Vice President and Secretary, 292 Madison Avenue, New York, N. Y. 10017

The activities of this Institute in the field of standardization are confined to specifications and standards in connection with the finished products of the zinc industry. The Institute is a member of the American Society for Testing and Materials, and cooperates with those committees dealing with corrosion of iron and steel, on specifications for nonferrous metals and alloys, and on corrosion of nonferrous metals and alloys. It has cooperated in the preparation of ASTM Specifications covering slab zinc (spelter), rolled zinc, and zinc base alloy die castings. In addition, it concerns itself in all ASTM Specifications relating to zinc-coated steel and iron articles such as, for example, fencing, wire, sheets, pipe, hardware, etc., as well as methods of test in connection therewith.

It cooperates also with the Standardization Division, Federal Supply Service, General Services Administration, in the preparation and revision of Federal Specifications covering slab zinc (spelter); zinc plates, sheets and strip; zinc anodes for cathodic protection; zinc base alloys for die castings; and zinc dust-zinc oxide primer paint (for galvanized (zinc-coated) or zinc surfaces). In conjunction with the promotion activities of the Institute and its efforts to improve the quality of zinc-coated (galvanized) roofing sheets, the Institute licenses steel manufacturers without charge to stamp the American Zinc Institute's Seal of Quality mark on all galvanized sheets, which conform to rigid specifications as to quality and which carry a full 2-ounce zinc coating.

ANTI-FRICTION BEARING MANUFACTURERS ASSOCIATION, James J. Whitsett, Secretary-Manager, 60 East 42nd Street, New York, N. Y. 10017

The Annular Bearing Engineers Committee, Roller Bearing Engineers Committee, and Ball Manufacturers Engineers Committee are sponsored by this Association. These engineering committees develop and maintain the AFBMA Standards for Ball and Roller Bearings and Balls, which are published as a set of twelve booklets covering: Terminology; Boundary Dimensions; Tolerances; Gaging Practices; Bearing Identification Code; Packaging—Recommended Method for Domestic and Export; Bearing Mounting; Mounting Accessories; Method of Evaluating Load Ratings for Ball Bearings; Balls; Method of Evaluating Load Ratings for Roller Bearings; and Instrument Ball Bearings.

AFBMA cooperates with the United States of America Standards Institute and International Organization for Standardization on the development of national and international standards. It also works with Government agencies on the improvement of Federal Specifications.

ARCHITECTURAL WOODWORK INSTITUTE, John L. Rose, Executive Secretary, 1808 West End Building, Nashville, Tennessee 37203

This Institute was formed in 1953 and in 1958 absorbed the Millwork Cost Bureau, which was established in 1914. AWI car-

ries on a sustained program of standardization in the fields of cost accounting, estimating, detailing and billing, and the fabrication of architectural woodwork, sometimes known as special millwork, detail millwork or contract millwork. This is done through the following publications: AWI Cost Accounting Manual (1963); AWI "Operational" Cost Estimating Book (1960); Quality Standards "Illustrated" of the Architectural Woodwork Industry (1963); Guide Specification for Architectural Woodwork (1962).

The Institute also maintains and offers correspondence course training for estimators and detailers and billers. Likewise, it publishes and distributes to architects and specification writers a series of brochures and technical bulletins to aid and inform them on the proper design-use and specifying of architectural woodwork.

ASBESTOS TEXTILE INSTITUTE, H. E. Sunbury, Executive Secretary, 75 Center Street, Pompton Lakes, New Jersey 07442

This Institute acts as a clearinghouse for information on asbestos textiles, and serves in an advisory capacity to various government agencies in the preparation and revision of purchase specifications.

The Institute publishes a "Handbook of Asbestos Textiles" which sets forth the various styles and properties of asbestos textiles, and lists the standard grades, weaves and weights of many of the textile products. Included is a Glossary of Asbestos Textile Terms, and ASTM Specifications and Method of Testing for asbestos textiles. A pamphlet, "Method for Determining Asbestos Dust Concentration," sets up standard procedure for determining asbestos dust concentration in work areas, equipment required for same, and approved forms for recording results.

The Institute publishes jointly with the Quebec Asbestos Mining Association, Asbestos-Cement Products Association (now the Mineral Fiber Products Bureau), and the Asbestos Textile Institute, a "Manual of Testing Procedures for Chrysotile Asbestos Fibre." This Manual sets up standard methods of test for asbestos fibre.

ASPHALT INSTITUTE, J. E. Buchanan, President, and A. S. Wellborn, Secretary and Chief Engineer, The Asphalt Institute, University of Maryland, College Park, Maryland 20740

The Institute has a technical committee structure consisting of: (1) Engineering and Development Committees in each of the four geographical Divisions of the Institute and one for Canada composed of asphalt technologists of member companies operating within the Division; (2) Project Committees composed of one representative from each Division, including Canada, concerned with research and development on specific problems relating to asphalt use and technology; and (3) Technical Coordinating Committee composed of the Engineering and Development Committee Chairman; this Committee coordinates technical committee activities of the Institute.

In addition, the Institute maintains a Research and Development Department including well-equipped laboratories, at its headquarters building.

The technical committees and the Research and Development

Department, as well as other Institute engineers, participate in a wide variety of technical society activities concerned with standardization of test procedures and material specifications related to asphaltic products and their use. The Institute has published construction specifications for a wide variety of asphalt applications in highway and airfield construction, uses of asphalt in hydraulic structures, asphalt protective coatings for pipe lines, uses of asphalt in recreational areas, and others. It cooperates with the American Society for Testing and Materials, the American Association of State Highway Officials and with state and federal agencies in laboratory and committee work related to standardization activities.

ASPHALT ROOFING INDUSTRY BUREAU, H. H. Whittemore,
Managing Director, 757 Third Avenue, New York, N. Y. 10017

The Technical Committee of this Bureau cooperates actively in the formulation and improvement of standards and specifications covering asphalt roofing products, which are developed by the Federal Government, the American Society for Testing and Materials, and the Underwriters' Laboratories. Through its Simplification Committee, this Bureau made studies and analyses designed to show the multiplicity of items produced in the industry and their relative importance from a sales volume standpoint. The purpose of these studies was to enable manufacturers to intelligently accomplish such individual simplification and standardization of their own lines as circumstances seemed to warrant. This organization maintains a research associate at the National Bureau of Standards conducting research work on durability of asphalt roofing.

ASPHALT AND VINYL ASBESTOS TILE INSTITUTE, C. B. Whitelsey, Jr., Managing Director, 101 Park Avenue, New York, N. Y. 10017

For many years, this Institute has prepared specifications for certain materials and methods in the resilient flooring field, and has worked with the Government in the preparation of similar Federal Specifications.

Following are the specifications currently published by this Institute: (a) Tile Specifications—Asphalt Tile, Vinyl Asbestos Tile; (b) Adhesives, Cleaners and Wax Specifications—Adhesives (Cut Back), Adhesives (Emulsion), Cleaners, Sweeping Compounds, Floor Polish (Water Emulsion); (c) Installation Specifications—Installation of Vinyl Asbestos and Asphalt Tile, Where to Use 1/16 in. Vinyl Asbestos Tile, Hardboard Underlayment; and (d) Maintenance Recommendations—Maintenance of Asphalt and Vinyl Asbestos Tile, Maintenance of Vinyl Asbestos and Asphalt Tile in Commercial Buildings, Floor Protection Devices for Hospitals, Floor Protection Devices for Schools.

ASSOCIATED COOPERAGE INDUSTRIES OF AMERICA, Miss Berenice Spilker, Secretary, 408 Olive Street, St. Louis, Missouri 63102

This organization carries on its standardization work through several committees appointed especially for that purpose. The

Committee on Grade Rules and Specifications for Slack Cooperage Material has developed standard specifications covering slack barrel staves, coiled elm hoops and slack barrel heading. The association assisted in the promulgation of Congressional Acts to fix the standard barrel for fruits, vegetables and other dry commodities, and to standardize lime barrels; also in establishing rules and regulations promulgated under authority of the Federal Standard Barrel Law, which are set forth in Circular C71 issued by the National Bureau of Standards.

The Committee on Grade Rules and Specifications for Tight Cooperage Material formulates specifications for tight barrel staves, and tight barrel heading, circled and square. These rules and specifications for cooperage material are used throughout the United States as standard.

The Committee on ICC Specifications for Slack Barrels considers and recommends specifications for slack barrels for the transportation of explosives and other dangerous commodities. In carrying forward this work it cooperates with the Interstate Commerce Commission, the Bureau of Explosives of the Association of American Railroads, the Manufacturing Chemists' Association, and other interested bodies. This committee also cooperates with the Freight Container Bureau of the Association of American Railroads in developing standards for slack barrels for fruits and vegetables. The Cooperage Association also established the requirements in Federal Specifications for Slack Wooden Kegs and Barrels, NN-K-231b and PPP-B-41, used by all Federal agencies.

The Committee on ICC Specifications for Tight Barrels cooperates with various organizations in developing proper standards and specifications for tight barrels for the transportation of explosives and other dangerous articles. The association assisted the Board of Trade of the city of Chicago in the development of standard specifications for pork barrels, lard tierces, and tierces for pickled meats. It also cooperated in the establishment of Federal Specifications for Tight Wooden Barrels, PPP-B-112a, for use of all Federal agencies.

The members of this association are constantly cooperating with container users in the development of barrels suitable for their products. These barrels are all made from material produced in accordance with the association's standard grades and specifications.

ASSOCIATED GENERAL CONTRACTORS OF AMERICA, William E. Dunn, Executive Director, 20th and E Streets N.W., Washington, D. C. 20006

Standardization and simplification constitute important activities in the conduct of affairs of this organization. The work is carried on by various committees and the national staff which, either on their own initiative or in cooperation with committees of other organizations, have developed standards and specifications approved by the AGC for the guidance and use of the members of the industry.

Through its Accident Prevention Committee, the association has published and kept under constant revision the "Manual of Accident Prevention in Construction."

The Joint Conference on Standard Construction Contracts, composed of representatives of the association and those of the principal public and private associations and societies in the construction industry, formulated standard contract forms for building, engineering, and standard forms for the qualification of bidders on public and private work, which have been adopted by the AGC.

Several special committees of the association have developed miscellaneous standard forms for construction, including prequalification of bidders, cost of owning construction equipment, etc.

The association is a member of the National Safety Council and is actively engaged in promoting interest in accident prevention in construction as well as considering other matters relating to construction safety under development by the National Safety Council.

The Mixer Manufacturers Bureau, composed of mixer and paver manufacturers in the United States, affiliated with the Associated General Contractors of America, has developed standard sizes and capacities for concrete mixers and pavers. Similarly, the Contractors Pump Bureau, also affiliated with the AGC, has adopted standard sizes and capacities for contractor's pumps. Both of these standards are in full effect and the principal manufacturers representing the great preponderance of production in the industry are guided by them.

The association cooperates also with the Central Committee on Lumber Standards in the establishment of American Lumber Standards dealing with lumber sizes and use classifications of commercial softwoods; and with the Commodity Standards Division (now Products Standards Section), National Bureau of Standards, Department of Commerce in the formulation of Product Standards relating to construction materials and supplies.

The association maintains official representation on 23 sectional committees functioning under the procedures of the United States of America Standards Institute, in developing standards and safety codes covering various projects in the construction and building industries. It is also represented on technical committees of the American Society for Testing and Materials engaged in the preparation of standard specifications for cement and for road and paving materials.

In cooperation with national labor unions it has developed standards for the training of apprentices in carpentry, bricklaying and cement masonry.

It is one of the four sponsoring organizations of the Modular Building Standards Association.

ASSOCIATION OF AMERICAN BATTERY MANUFACTURERS,
B. F. Morris, Executive Secretary, 19 North Harrison Street, East Orange, New Jersey 07017

This Association was formed in 1924 as the National Battery Manufacturers Association and changed to its present name in 1940. The Association maintains a technical committee consisting of outstanding battery engineers who recommend standards to the board of directors covering such subjects as capacity standards, life expectancy, materials composition, etc. In addition this com-

mittee keeps abreast of the activities of the National Bureau of Standards, the Society of Automotive Engineers and the United States of America Standards Institute to the extent that they may be of interest to the battery manufacturing industry.

ASSOCIATION OF AMERICAN FEED CONTROL OFFICIALS,
Bruce Poundstone, Secretary, University of Kentucky, Lexington,
Kentucky 40506

The primary objective of this Association is to promote uniformity in legislation, definitions, rulings, and the enforcement of laws relating to the manufacture, sale, and distribution of feeding stuffs and livestock remedies on the continent of North America.

The Association has officially adopted definitions and standards of feeding stuffs for classes of products including the following: Alfalfa, animal, barley; brewers' and distillers'; corn, cottonseed, linseed and flax, marine, milk, mineral, oat, peanut, rice, rye, screenings, soybean, vitamin, wheat, yeast, additives used for growth promotion and therapeutic purposes, and others. In carrying forward its work the Association has adopted the methods of analysis of the Association of Official Agricultural Chemists.

Committees of this Association cooperate with committees of the American Feed Manufacturers Association, National Cottonseed Products Association, National Mineral Feeds Association, National Soybean Processors Association, American Meat Institute, American Dehydrators Association, and the National Fisheries Institute, in attaining high standards of feed production for the betterment and benefit of the feed industry as a whole. The Association also collaborates with the United States Food and Drug Administration in the enforcement of regulations under the Federal Food, Drug, and Cosmetic Act.

It has adopted uniform types of labels for all classes of feeds. Manufacturers or jobbers are required to place labels on all packages of feeds, and the registration of brands and guarantees must be filed with each State-control agency. A guarantee and label for a brand having been registered may not be subsequently so modified as to permit the lowering of the quality of the feed, unless it can be clearly shown that the modification sought to be made is consistent with the interest of the feeder. The control organization may cancel the registration of any feed when it has been found that the brand name is misleading in any respect, or that the feed contains an injurious ingredient, or packages are incorrectly labeled with regard to ingredients, or there is evidence of misbranding or adulteration, or when labels on packages contain any statement, design, or device which tends to deceive the purchaser.

ASSOCIATION OF AMERICAN RAILROADS, D. P. Loomis, President, R. E. Keefer, Secretary-Treasurer and Administrative Assistant to President, Transportation Building, Washington, D. C. 20006; 59 East Van Buren Street, Chicago, Illinois 60605; 63 Vesey Street, New York, N. Y. 10007

This Association is the central coordinating and research agency of the American railroad industry. It was established in 1934 as

an outgrowth of numerous earlier organizations, many of which dated back to 1867 and were created for the purpose of standardizing various features of railroad service. The Association was formed in the interest of adequate and efficient railroad service and to enable the railroads to better contribute to the accomplishment of the purposes of the national transportation policy. The Association represents the railroads in appropriate cases before the courts, administrative tribunals, Congressional committees, and other government bodies. It serves as the joint agency of the railroads concerning such matters as research, operation, traffic, accounting and financing, as well as industry-wide problems in the data processing field, which may require joint handling in furtherance of the national transportation policy.

For functional purposes, the Association is organized by departments which span the fields of Law, Operations and Maintenance, Finance and Accounting, Research, Railway Economics and Statistics, Public Relations, and Data Processing Systems and Procedures. Those departments which include standardization as a major part of their activities are described in the following paragraphs.

OPERATIONS AND MAINTENANCE DEPARTMENT, OPERATING-TRANSPORTATION DIVISION, C. A. Lauby, Executive Vice Chairman (Washington)

A General Committee composed of 19 Chief Operating Officers and one representative of the American Short Line Railroad Association supervises the activities of this Division. The work of the Operating-Transportation Division is carried on by several sections, advisory committees, and standing committees which study and report on the various specialized problems that arise. The efforts of the General Committee and the standing committees are directed toward standardization of rates and rules pertaining to mileage, per diem, demurrage and storage.

The Sections and Advisory Committees that follow are interested in standardization of the fields indicated.

SAFETY SECTION, W. E. Todd, Staff Secretary (Chicago)

Assists Member Roads in safety programs to promote preventive activities for reducing accidents and personal injuries. It has worked to develop clarification and standardization in railroads' reporting accidents under the Interstate Commerce Commission's Rules Governing the Monthly Reporting of Railroad Accidents.

COMMUNICATION AND SIGNAL SECTION, George McCann, Secretary (Chicago)

This Section coordinates the principles and practices of American railroads, and revises and keeps up to date Drawings, Specifications, Requisites and other miscellaneous information contained in its Manuals of Recommended Practice covering design, construction, maintenance and operation of railway communications and signaling devices.

The Section investigates the development of new devices,

improvement of existing equipment, and new methods of installation, maintenance, and operation pertinent to the arts of communications and signaling, through its standing committees under the following subject titles: Wire and cable lines; practices and operation; electronics; radio; instructions and shop practice; designs; inside plant; highway grade crossing protection; transmission and interlocking, traffic control and block signaling.

The Section has also prepared a series of educational chapters on American Railway Signaling Principles and Practices covering the various phases of signaling, and the Communication Maintainers' Training Course for the training of Communication Department employees. It has a visual aid training program for Signal Department employees.

The Section has representatives on technical committees of the American Society for Testing and Materials, United States of America Standards Institute, FCC Advisory Committee for Land Mobile Radio Services, FCC National Industry Advisory Committee, National Bureau of Standards on Standardization of Signal Light Colors, National Safety Council Committee on Traffic Safety at Highway-Railroad Crossings, and Operational Fixed Microwave Council.

RAILWAY SANITATION ADVISORY COMMITTEE (Chicago)

This Committee assists railroads with sanitation problems affecting equipment and facilities and maintains contact with the interested governmental agencies to insure that related matters receive the proper consideration.

MEDICAL AND SURGICAL ADVISORY COMMITTEE (Chicago)

This Committee maintains contact with Chief Medical and Surgical Officers of Member Roads to progress standards in the medical field and standardization of procedures relating to the health of railroad employees and patrons. It cooperates with State health agencies and the U. S. Public Health Service in order to keep informed of the latest developments in the medical field.

POLICE ADVISORY COMMITTEE (Chicago)

This Committee handles problems of importance to the railroad industry and attempts, where possible to develop standard practices in matters relating to law enforcement practices, national emergency conditions, trespassing, safety education and training.

STATION OPERATION ADVISORY COMMITTEE (Chicago)

This Committee assists Member Roads in the development of important practices and procedures affecting station and terminal operations.

MOTOR TRANSPORTATION ADVISORY COMMITTEE (Chicago)

Development of uniform procedures and practices in the rail-highway transportation field is the objective of this Committee's efforts. One important area of study is development of a mutually

accepted identification system covering trailers and containers that could be used by both the rail and motor carrier industry.

COMMITTEE ON OPERATING RULES (Chicago)

The functions of this Committee relate to the development of standard rules and practices regarding the operating phase of railroading.

**FREIGHT CLAIM DIVISION, A. L. Batts, Executive Vice Chairman,
J. C. Hindman, Secretary (Chicago)**

This Division publishes a Freight Claim Rule Book, or Manual of Practices, in which are set forth (1) rules and standards prescribed for the investigation, adjustment, and interline apportionment of claims paid; (2) lists of freight claim and prevention officers of member carriers; (3) standard forms used to file claims and furnish statistical information of freight loss and damage; (4) recommended practices in loss and damage prevention work and (5) other information for use in the Freight Claim Offices of member carriers. There are also published and distributed annually, in printed form, interpretations of freight claim rules as handed down by the Committees of the Division, as the result of arbitration procedure.

FREIGHT LOSS AND DAMAGE PREVENTION SECTION, C. A. Naffziger, Director (Chicago)

The Freight Loss and Damage Prevention Section is responsible for all freight loss and damage prevention activities. It maintains close coordination with shippers, shipper organizations and Member Roads for the purpose of developing and establishing practical ways and means to reduce loss and damage to freight. The Section's activities are directed by a National Freight Loss and Damage Prevention Committee which reports to the General Committee of the Freight Claim Division. Special Committees deal with specific phases of freight loss and damage prevention and make recommendations to the National Freight Loss and Damage Prevention Committee.

**MECHANICAL DIVISION, W. H. Chidley, Executive Vice Chairman,
F. H. Stremmel, Secretary (Chicago)**

Through the activities of its various committees and the investigations and research carried out under their direction, this Division has adopted standards and recommended practices covering materials for cars and locomotives which are incorporated in a manual. This manual, which is revised and supplemented annually, includes material specifications for steel axles, wheels, forgings, tires, steel springs, iron and steel castings, pipe and pipe fittings, bearings, rubber hose, gaskets, and miscellaneous materials. A supplement to the manual is published which contains drawings pertaining to certain details of cars and trucks. The Division also issues periodic revisions of individual manuals relating to wheels and axles, lubricating oils, greases, lubricating devices, bearings, etc. The Division is represented on the Standards Council and Mechanical Standards Committee of the United States of America Standards Institute.

Through its Committee on Loading Rules, the Division publishes mandatory rules covering standard methods to govern loading of commodities on open top cars. These methods are formulated in cooperation with the shippers of such commodities, and are carefully tested before adoption. Thousands of test loads are annually followed through to destination. These rules are in the interest of safety to employees, the general public, and lading and equipment.

The various committees of the Division are at present continuing their investigations and research for the purpose of keeping the standards and recommended practices revised and up-to-date, and leading to the adoption of additional practices for the improvement of railroad rolling stock and motive power.

The Committee on Couplers and Draft Gears is continuing its investigation of couplers, draft gears and cushioning devices in cooperation with the manufacturers.

The Committee on Freight and Passenger Car Construction, in cooperation with committees representing all of the Car Builders, continues its work in connection with improving the designs of standard cars. These two groups recently developed a new publication which is entitled "Specifications for Design, Fabrication and Construction of Freight Cars." This new manual is published and distributed by the Mechanical Division.

The Committee on Wheels and Axles, in cooperation with the technical committees of the manufacturers representing the various types of wheels, is carrying on investigation and research in connection with the specifications, designs, and service of the various kinds of wheels.

The Committee on Tank Cars is cooperating with the builders, owners, and users of tank cars in connection with designs and service of tank cars and tank car appliances and devices.

The Committee on Locomotives and Locomotive Fuels and Lubricants, in cooperation with a committee of engineers representing the locomotive builders, is conducting investigations and research for the purpose of improving the design and service of locomotives, and in increasing the degree of standardization of fundamental parts of locomotive design. This committee also collaborates with the producers of fuel oils and lubricants in the development of more efficient products in this field.

When the former Electrical Section of the Engineering and Mechanical Divisions were abolished, as such, a new committee was established in the Mechanical Division which has been designated as the Committee on Electrical Equipment-Rolling Stock. This Committee has taken over the activities of the former Electrical Section which pertain to electrical details on rolling stock, the remainder of the activities being taken over by the AAR Engineering Division. The Manual, which was published by the former Electrical Section, is now being jointly maintained by the Engineering and Mechanical Division. The new Committee on Electrical Equipment-Rolling Stock collaborates with the manufacturers in the development of recommended practices pertaining to electrical details which are used on rolling stock and in many cases these recommended practices are followed to the extent that they are recognized as being very close to AAR Standards in this field.

BUREAU OF EXPLOSIVES, T. C. George, Director and Chief Inspector (New York)

This Bureau functions as an agency for cooperation between shippers, carriers, and the Interstate Commerce Commission; maintains a chemical laboratory for the study of explosives and dangerous articles and containers therefor, and a staff of traveling inspectors to insure compliance with the requirements of regulations and specifications of the Interstate Commerce Commission dealing with the transportation of explosives and other dangerous articles.

FREIGHT LOADING AND CONTAINER SECTION, B. Williams, Chief Engineer (Chicago)

The objective of this Section is to provide improved packaging or carloading methods for nondangerous commodities moving in rail freight cars. This Section conducts surveys with shippers or receivers of freight in order to develop recommended practices for loading and packing of freight.

These activities include performance of tests for the purpose of comparing packaging or loading methods.

To provide interchange of information, the Section participates in activities of trade associations or industrial organizations representing manufacturers of shipping containers or commodities moving as freight as well as groups or associations developing standards.

ENGINEERING DIVISION (see American Railway Engineering Association)

TRAIN OPERATION, CONTROL AND SIGNALS COMMITTEE, RAILROAD-HIGHWAY GRADE CROSSING PROTECTION, P. H. Foley, Engineer (Washington)

This Committee publishes a bulletin of recommended practices on railroad-highway grade crossing protection, which has been approved as USA Standard, for use as a guide by railroads and government agencies. The Committee works closely with the Bureau of Public Roads and other public authorities toward establishment of uniformity in aspect and operation of grade crossing protective devices and systems.

PURCHASES AND STORES DIVISION, J. H. Bean, Executive Vice Chairman (Chicago)

Committees of this Division are actively engaged in preparing recommended standards, specifications, and rules and practices in order to bring about the highest efficiency and economy in the purchasing, handling and distribution of materials and supplies in the railway industry.

A Purchasing and Stores Department Manual, containing recommended rules and practices, a Standard Material Classification, a Standard Scrap Classification, and a Simplified Standard Material List (Recommended Sizes), have been prepared.

The Committees of this Division have been setting up recommendations of standards for machine accounting, methods for more economical preparation of scrap, procedures used in purchas-

ing, office supplies and equipment, material handling methods, methods of disposing of surplus material and methods for improving inventory control.

These subjects together with others will be pursued by this Division with the ultimate in mind of furthering more efficient practices in the purchasing, handling, storing and distribution of materials and supplies.

FINANCE AND ACCOUNTING DEPARTMENT, Wayne Irwin, Vice President (Washington)

This Department deals with standardization and simplification of railroad accounting, treasury, taxation and valuation practices and requirements. This Department prepares various publications embracing rules, standard forms, procedures, codes, etc.

DATA SYSTEMS DIVISION, Carl L. Byham, Executive Director (Washington)

In the area of Data Processing Systems and Procedures, consideration is given to industry-wide problems in the data processing field, simplification of the interchange of data between carriers and stimulation of the development of new railroad data processing techniques. This is a relatively new undertaking. Standardization and simplification are basic objectives.

RESEARCH DEPARTMENT, W. M. Keller, Vice President (Research Center, Administration Building, 3140 South Federal Street, Chicago, Illinois 60616)

This Department has charge of technical research on problems affecting carriers, and provides properly digested information for other departments. It deals with matters pertaining to analysis, testing and study of all technical phases of transportation. Standardization studies are an important part of its work.

ASSOCIATION OF AMERICAN WOOD PULP IMPORTERS, Walter W. Schuster, President, 230 Park Avenue, New York, N. Y. 10017

This Association is officially represented, with the American Paper and Pulp Association and the Technical Association of the Pulp and Paper Industry, on a joint committee to approve and govern the actions of commercial chemists engaged in the testing of wood pulp for the paper industry in the United States. Official rules relating to the weighing, sampling, and testing of wood pulp for moisture have been formally approved and adopted by this Association.

ASSOCIATION OF BEDDING AND FURNITURE LAW OFFICIALS, c/o H. R. Ray, Director, Bedding Law Division, Environmental Sanitation Services, Texas State Department of Health, 1100 West 49th Street, Austin, Texas 78756

This Association provides a national forum for the discussion of all questions relating to the administration of bedding and upholstered furniture laws as carried on by regulatory officials of the States, commonwealths, territories and possessions of the United

States, their political subdivisions, the District of Columbia and the Dominion of Canada. The Association encourages and promotes the adoption of uniform bedding and upholstered furniture laws, rules, regulations, nomenclature, labeling requirements and enforcement procedures. It secures, devises, tests and adopts standard methods of inspection and sampling of bedding and upholstered furniture and the analyses of filling materials used therein.

Other purposes of the Association are to secure, devise, test and adopt standard methods of determining the efficiency of insecticides, fumigants, sterilizing and disinfecting processes and equipment as applied to articles of bedding, upholstered furniture and filling materials used therein; to secure uniformity in the statement of analytical results; to promote, conduct and encourage research in chemistry and allied fields as these relate to analyses of filling materials used in bedding and upholstered furniture.

ASSOCIATION OF EDISON ILLUMINATING COMPANIES,
W. Floyd-Jones, Secretary, 51 East 42nd Street, New York, N.Y. 10017

Much of the Association's work in standardization is carried on in cooperation with technical organizations, notably, the United States of America Standards Institute. The Association is officially represented on the following seventeen USASI Sectional Committees B16, B31, B36, B49, C1, C2, C7, C8, C12, C29, C34, C37, C50, C55, C76, 05, and Y32.

In consultation with the Insulated Power Cable Engineers Association, the Cable Engineering Section of the Association's Committee on Power Distribution prepared specifications for impregnated paper insulated cable—solid, low-pressure, gas-filled and oil-filled types (all lead covered), high pressure pipe type, specifications for neoprene protective coverings for the lead-covered cables, and a guide for application of maximum insulation temperatures at the conductor for impregnated-paper-insulated cables. All were printed by the Association.

ASSOCIATION OF IRON AND STEEL ENGINEERS, T. J. Ess,
Managing Director, 1010 Empire Building, Pittsburgh, Pennsylvania
15222

This Association was founded in 1907 as a means of fostering an exchange of ideas toward the advancement of the iron and steel producing industry. The scope of the AISE now embraces all the various divisions of steel plant engineering and operations. Engineering divisions include electrical, mechanical, welding, combustion, operating practice, lubrication, safety, rolling mill, standardization and research. District sections are scattered at steel producing centers throughout the country.

The Association has developed standards for the steel industry which include such items as motors, surface finish, cranes, wiring, brakes, bearings, etc. In some cases these are detailed standards, in other cases they are recommended practices. A list of current standards is as follows: "D-C Mill Motor Standards," "Standards for Machined Surface Finishes," "Sling and Crane Chain Standards," "Standards for Wiring Diagrams," "Specifications for

Electric Overhead Traveling Cranes for Steel Mill Service," "Specifications for Design of Ladle Hooks," "Crane Wiring Standards," "Standards for Design of Hot Metal Ladles," "Carbon Brush Size and Shunt Standards," "D-C Mill Motor Brake Standard," "Plain Bearing Recommended Practice," "A-C Mill Motor Standards."

The AISE also sponsors research activities at research institutions for the purpose of developing data for future standards and for improvement of steel mill operating practice.

ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, William Horwitz, Secretary-Treasurer, Box 540, Benjamin Franklin Station, Washington, D. C. 20044

The Association, formerly the Association of Official Agricultural Chemists, is a professional organization of State and Federal chemists devoted to developing, testing, and sponsoring standard methods for the analysis of fertilizers, foods, feeds, pesticides, drugs, cosmetics, hazardous substances, and other materials related to agriculture and public health. It was organized in 1884 by the State and Federal chemists who were in charge of enforcement of State fertilizer laws, or who, as members of agricultural experiment stations or the U. S. Department of Agriculture, were interested in practical and scientific applications of fertilizers to crops. The form of organization is one in which voting is restricted to official chemists, but discussion is open to all chemists. Four meetings prior to 1884 had failed to produce a cohesive and stable organization of both official and commercial chemists. This final organization form was settled upon with the full cooperation and even insistence of commercial chemists. They agreed on the principle that since it was the official chemists who had the responsibility for the enforcement of the laws, they also had the responsibility for the choice of valid methods of analysis for this purpose.

As the regulatory control of other commodities such as foods, feeds, drugs, cosmetics, hazardous substances, and pesticides became a recognized Governmental function, the work of the Association expanded. It has accepted the responsibility of providing the regulatory and research scientist with accurate and reproducible methods of analysis that are required for the enforcement of laws and regulations. This is accomplished through adherence to a fundamental constitutional requirement that methods approved by the Association be subjected to collaborative study. In this, a number of representative chemists analyze the same samples by the proposed method to demonstrate its accuracy and reproducibility in their hands. At the present time about 500 chemists, designated as "Associate Referees," are studying methods of analysis grouped in about 50 general categories from "Agricultural Liming Materials" to "Waters." Not all of them are official chemists; many are industry chemists, who because of their specialized knowledge and experience, also participate in the development and testing of methods of analysis. The results of the studies of these Associate Referees form the basis for the actions of the Association in its approval or disapproval of methods.

All State chemists including those of universities and experiment stations are members of the Association. Federal organiza-

tions represented in the Association are: Food and Drug Administration, Public Health Service, Department of Agriculture, Department of Defense, Internal Revenue Service, Fish and Wildlife Service, National Bureau of Standards, and Atomic Energy Commission.

The laws enforced by the AOAC members require objective, scientific evidence for their successful application. The AOAC attempts to provide for both industry and government a common meeting ground for discussion, at a scientific level, of methods of analysis that will be used to obtain this evidence. That this has been successful is indicated by the facts that many State laws specify the use of the AOAC methods, where applicable; the Federal Definitions and Standards of Identity for many foods incorporate AOAC methods into their requirements; many Federal specifications and private contracts use AOAC methods; and AOAC methods have been quite generally accorded a preferred status in court testimony. Most important of all, the general recognition of AOAC methods removes from the realm of controversy the scientific question of relative validity of methods of analysis. This is settled by the scientists themselves on the basis of the facts developed during their collaborative studies.

Results of 78 years of work by the members of the Association are embodied in its primary publication "Official Methods of Analysis of the Association of Official Agricultural Chemists," now in its tenth edition (1965). This publication is a 900-page laboratory manual which includes 43 chapters, 90 pages of tables, and 45 pages of index. It is an authoritative source of methods of analysis for the regulatory chemist and the agricultural scientist throughout the world. It is supplemented by the bimonthly Journal which publishes the transactions of the Association, including the annual changes in methods adopted by the Association, the reports of the referees, and contributed papers containing new methods, new applications and authentic or interpretive data.

The Association deals with only methods of analysis. Matters involving legislation, definition, administrative policy, and interpretation of laws are dealt with in related official organizations: The Association of Food and Drug Officials of the United States, Association of American Fertilizer Control Officials, Association of American Feed Control Officials, and Association of American Pesticide Control Officials. The AOAC maintains formal and informal cooperative arrangements with other scientific societies dealing with methods of analysis to maintain uniformity. Among these are the American Public Health Association (Standard Methods for the Examination of Dairy Products), American Oil Chemists' Society (Fats and Oils), American Society of Brewing Chemists (Malt Beverages), Joint Committee on Uniformity of Methods of Water Examination (Waters), American Society of Enologists (Wines), American Association of Cereal Chemists, American Society for Testing and Materials, National Plant Food Institute, and Flavoring Extract Manufacturers Association. In the International area, cooperation has developed with the Collaborative Pesticide Analytical Committee, Pesticides Analysis Committee of the Ministry of Agriculture in the United Kingdom, the Food and Agriculture Organization of the United

Nations, International Dairy Federation and International Standards Organization.

ASSOCIATION OF OFFICIAL SEED ANALYSTS, H. L. Smith, Secretary-Treasurer, 1113 State Office Building, Richmond, Virginia 23219

The activities of this Association in the field of standardization of methods of seed testing are carried out primarily by the following standing committees: (a) Research, (b) Rules, (c) Referee, and (d) Public Service. The principal objective in this field is to develop reliable procedures for testing seeds that will permit duplication of results when the same sample is tested by different stations. Quality factors for which tests are made include: purity of sample, percentage germination, rate of occurrence of noxious weed seeds, varietal purity, and assaying for fungicidal seed treatment. The Research Committee conducts research and reviews literature to make technical information available to the Rules Committee which prepares a new draft revision of the rules about every fifth year for approval or rejection by the entire Association. The Rules Committee also interprets questionable and disputed points of the Rules for Testing Seeds. The Referee Committee circulates samples among the member stations to determine whether stations are testing in accordance with the rules and to point up any weaknesses in the rules. The Public Service Committee encourages Association members to publicize the benefits of our work and stimulate interest in seed testing. A publicity kit has been prepared and added to over the years and is circulated for use by member laboratories.

The Association works closely with other associations and Government agencies, such as the International Seed Testing Association, United States Department of Agriculture and the Canada Department of Agriculture, in an effort to closely coordinate the rules for testing seeds used by each. Voting membership in the AOSA consists of Federal and State laboratories in the United States and Canada. The Governments of the United States and Canada hold membership in the International Seed Testing Association.

ASSOCIATION OF PETROLEUM RE-REFINERS, V. T. Worthington, Executive Director, 1500 North Quincy Street, Arlington, Virginia 22207

In April 1955, this Association adopted minimum standards for re-refined lubricating oil. This action was taken to give the public a minimum standard for buying re-refined oil.

In 1957, it adopted an Association Emblem to be used in connection with its minimum standard so the public could readily determine oils meeting this minimum standard.

ATOMIC INDUSTRIAL FORUM, G. Edwin Brown, Jr., Program Executive, 850 Third Avenue, New York, N. Y. 10022

The Forum is a non-profit membership association of 350 United States and foreign organizations engaged in the development and utilization of nuclear energy for peaceful purposes. The Forum sponsors two sectional committees reporting to the Nuclear Stan-

dards Board of the United States of America Standards Institute: N2 on General and Administrative Standards for Nuclear Energy, and N7 on Radiation Protection. The latter is co-sponsored by the National Safety Council.

The N2 and N7 committees developed the first two nuclear standards to be approved as USA Standards by USASI. These cover the standard radiation symbol and radiation protection in uranium mines and mills. Subsequently approved as a USA Standard was the N7 standard on radiation protection in fuel fabrication plants.

The Forum is a member body of USASI and is represented on the Standards Council and Nuclear Standards Board. It maintains liaison with other sectional committees under the jurisdiction of the Nuclear Standards Board, including the Z54 committee sponsored by the National Bureau of Standards. The Forum contributes financial support for the activities of the National Council on Radiation Protection and Measurements.

AUTOMOBILE MANUFACTURERS ASSOCIATION, Harry A. Williams, Managing Director, New Center Building, Detroit, Michigan 48202

Practically all standardization work arising in the industry represented by this organization is conducted through the Society of Automotive Engineers financed in substantial part by grant from the Association. The Association cooperated with the National Conference on Street and Highway Safety in the preparation and promulgation of State and city traffic ordinances. This work continues under the National Committee on Uniform Traffic Laws and Ordinances.

With the American Petroleum Institute and the Society of Automotive Engineers, the motor vehicle industry has made a substantial contribution to standardization through the Coordinating Research Council in the fields of fuels and lubricants. One of its accomplishments is a new formula for expressing antiknock ratings of motor fuels above 100 octane number. It has been active in studying the composition of exhaust gases from automotive vehicles including techniques used. A study of applications of gas chromatography to analysis of exhaust gas at the U. S. Bureau of Mines, was supported by this group and related investigations continue.

This Association works closely with the United States of America Standards Institute in connection with standards for inspection of motor vehicles, safety glazing materials for motor vehicles, antifriction bearings, pallets, highway traffic standards—including method of measuring and recording motor transportation accidents, standards for graphic presentation and petroleum products and lubricants. It is active in international standards programs of ISO.

AUTOMOTIVE AIR CONDITIONING ASSOCIATION, L. T. Merrill, Executive Secretary, 6300 North Central Expressway, Dallas, Texas 75206

This Association is the only group offering manufacturers a standards program in the field of automotive air conditioning.

With current annual production of over 2,000,000 air conditioned cars (factories and independents), AACA brought out the first standard, AACA Standard 100 for air quantity (cfm) certification, in December 1964. This standard is comprised of a Procedures Manual—Definitions, Testing Methods, Calculations and Rating Requirements—and a License Agreement.

Each manufacturer desiring to participate in designing and manufacturing units to rigid engineering and comfort standards is invited to participate through License Agreement with the Association. Through such "certification" each manufacturer tests units manufactured under exact and similar means, thereby assuring the buying public of units made to known standards of design, engineering, and performance.

In September 1965 the Association approved and adopted its second standard, AACA Standard 200 for evaporator capacity (btu) performance. Certification under this latter standard automatically certifies performance of units tested to both existing standards.

The Engineering Committee of this Association is continuing its efforts to develop other standards applicable to both car and truck air conditioning.

BARRE GRANITE ASSOCIATION, Milton V. Lyndes, General Manager, 51 Church Street, Barre, Vermont 05641

In 1937 this Association created the first set of quality standards covering the physical properties of granite and quality standards of workmanship on granite monuments. This action had become necessary due to the wide quality differences prevalent in granite and the difficulty of the public in distinguishing quality. A copyrighted trade name called the Barre Guild was placed on all monuments inspected by the Barre Granite Association, and Certificates of Guarantee were issued on these monuments. Today, nearly 50,000 individual inspections are made each year, and the Barre Guild trademark signifies a standard of quality in the finished monument.

BIOLOGICAL STAIN COMMISSION, Victor M. Emmel, M. D., Secretary, Research and Assay Laboratories, University of Rochester Medical Center, Rochester, N. Y. 14620

The Commission was incorporated in 1944 and supersedes the Commission on Standardization of Biological Stains. Its powers are vested in a Board of (eleven) Trustees, four of whom are officers. Membership in the Commission is by invitation and includes approximately 100 members.

The objectives of the Commission are the establishment of standard specifications for the identification, purity, performance and labeling of the more important biological stains, in order that they may be relied upon as standard tools in biological research. The Commission has the active cooperation of the scientific societies whose interests lie in this field, as well as that of the manufacturers and distributors of biological stains. Its specifications for a number of stains have been adopted by the U. S. Pharmacopoeia, the National Formulary, and in the Standard Methods of the American Public Health Association.

The Commission exerts its influence to the above ends through a program of Stain Certification. Manufacturers and distributors voluntarily submit samples for examination. If a sample meets the Commission's specifications, the Commission then approves it for marketing as a Certified Biological Stain, and issues Certification Labels to be affixed to the containers in which it is sold. Certification is on a batch basis, the labels issued by the Commission bearing distinctive Certification Numbers identifying the specific batches with which they are to be used. No other batch can be sold under the same Certification Number except by such a breach of confidence on the part of the manufacturer as to risk losing the good will of the Commission. A sample of the original material from each batch is kept on permanent file in the Commission Laboratories. The Commission will also investigate complaints of any unsatisfactory results obtained with a certified stain. Fifty-seven stains are currently certified by the Commission.

**BITUMINOUS PIPE INSTITUTE, John M. Aldworth, Secretary,
333 North Michigan Avenue, Chicago, Illinois 60601**

Through the Institute's Research and Technical Committee, all member companies' pitch-fibre pipe products have been standardized to conform with CS116-54. Continuous and rigid inspection procedures have been established by the Research and Technical Committee over the years to ensure high levels of manufacturing procedure.

The Institute cooperates closely with the American Society for Testing and Materials, National Bureau of Standards, American Society of Sanitary Engineers, Southern Building Code Congress, Western Plumbing Officials Association, and all other major standard-setting organizations within the plumbing, sewage, and sanitary engineering fields.

**BOATING INDUSTRY ASSOCIATION, Fred B. Lifton, Executive
Director, 333 North Michigan Avenue, Chicago, Illinois 60601**

The outboard boating industry, faced with a unique problem in standardization, conducts a continuing standardization program and issues an annual "Engineering Manual of Recommended Practices" through its national trade association. Three trade associations, operating within the framework of the Boating Industry Association, participate in the standards program. They are the Outboard Boat Manufacturers Association, the Outboard Motor Manufacturers Association, and the Boat Trailer Manufacturers Association.

The most popular outboard boat unit from the standpoint of the consumer consists of three parts—the boat, the motor, and the boat trailer. Each part is manufactured by a different segment.

Standards are adopted through the work of committees representing boat, motor, and trailer manufacturers, and through joint committees of the three segments of the industry. Committee work is augmented by field tests by individual manufacturers and

industry-wide tests. The standards include transom dimensions, motor mounting areas, fuel tank stowage, horsepower capacity, weight capacity, motor dimensions, horsepower ratings, winch assembly, advertised trailer load capacity, trailer equipment, minimum deck hardware, steering wheel dimensions, steering system pulleys, lighting requirements. Fire protection standards are also included.

BOOK MANUFACTURERS' INSTITUTE, Robert M. Peck,
Executive Director, 25 West 43rd Street, New York, N. Y. 10036

This Institute, together with the American Textbook Publishers Institute and National Association of State Textbook Directors, provides delegates to the Joint Committee on Textbook Specifications which meets twice each year. Over the years, the Joint Committee has developed a set of manufacturing standards and specifications which must be met before the purchase of a particular textbook will be considered by most state adoption agencies. This booklet, entitled "Official Manufacturing Standards and Specifications for Textbooks," contains quality standards and specifications for paper, printing, and binding, and provides sample forms which should be used by both the State agencies and the publishers of textbooks.

Through its Book Cloth Council and in cooperation with the National Bureau of Standards, the Institute is presently revising Commercial Standard CS57-40 on Book Cloth.

BRASS AND BRONZE INGOT INSTITUTE, E. Vander Meir,
Manager, 308 West Washington Street, Chicago, Illinois 60606

The Institute's technical program relative to the development of standards and specifications covering ingot brass and bronze is directed by its Metallurgists' Advisory Committee, which is composed of the chief metallurgists of all member companies. In carrying out this work, the Institute cooperates with the American Society for Testing and Materials through representation on the latter's technical committee dealing with the development of specifications for copper base alloys in ingot form.

In order to assist those interested in nonferrous foundry alloys to utilize quality copper base alloys in ingot form with maximum economy and efficiency, the Institute has prepared and published a manual entitled "Ingot Brass and Bronze." This manual contains specifications issued by the Institute and those which have been approved and adopted by various organized technical societies and governmental agencies.

For many years, the Institute has maintained research programs at Battelle Memorial Institute, Columbus, Ohio, for the purpose of establishing authoritative values of physical properties, temperature effects and creep data. The Institute also cooperates with other organizations engaged in research, such as the Foundry Educational Association, institutions of higher learning, and industrial research departments, to obtain data concerning various alloys for dissemination to the industry and users.

BRITISH-AMERICAN CHAMBER OF COMMERCE, A. P. Spooner, M.B.E., Secretary and General Manager, 355 Lexington Avenue, New York, N. Y. 10007

This is one of the 10 centers in the United States where complete sets of British Standards are held for reference purposes. British Standards, like USA Standards, are issued for voluntary adoption by manufacturers and users and being the result of wide consultation and agreement, provide a guide to accepted industrial practice in the United Kingdom. The main categories of British Standards are: Dimensional standards, performance and quality standards, standard methods of test, standard technical terms and symbols and standard codes of practice. There are now about 3900 British Standards which are indexed and summarized in the British Standards Yearbook (also available for reference). They contain valuable information both for United States firms wishing to sell in the United Kingdom and for those interested in placing contracts there. Other centers where sets of British Standards may be consulted are: United States of America Standards Institute, New York, N. Y. (copies also available for sale); British Embassy, Washington, D. C., National Bureau of Standards, Washington, D. C.; American Society for Testing and Materials, Philadelphia, Pennsylvania; Purdue University, Lafayette, Indiana; Cleveland Public Library, Cleveland, Ohio; Linda Hall Library, Kansas City, Missouri; Milwaukee Public Library, Milwaukee, Wisconsin; Wayne University, Detroit, Michigan.

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION, Clyde T. Nissen, Executive Director, 60 East 42nd Street, New York, N. Y. 10017

This Association serves the interests of all builders hardware manufacturers located in the United States. One of its active programs is the development of industry product standards for more than 400 items of builders' hardware. These standards will probably be submitted to the United States of America Standards Institute for adoption as USA Standards. In addition, it is expected that BHMA standards will be submitted to Government agencies for referencing in Federal Specifications and Product Standards, and in State specifications, where applicable.

BUILDING OFFICIALS CONFERENCE OF AMERICA, Paul E. Baseler, Executive Director, 1313 East 60th Street, Chicago, Illinois 60637

This is the recognized professional organization serving government officials who administer, enforce or formulate laws, ordinances or regulations relating to buildings, housing, city planning and zoning. The organization is controlled solely by public officials. Its policies are directed by an Executive Committee of 5 officers, 2 past presidents and 10 directors selected from all parts of the United States and Canada. Its program and activities are carried on by a staff under the direction of an Executive Director selected by the Executive Committee.

It sponsors and maintains building codes providing for the

safety of the public through minimum regulations free from commercial influences, permitting the use of materials and methods of construction on their own merits without favor or prejudice. These codes are available for adoption by local governments without obligation and are maintained up-to-date with new developments as a public service. Through national, regional and local meetings and consultation and advisory services, assistance is provided local communities in improving administrative techniques and services.

Except for its building codes, the organization does not establish standards of materials, construction or practice. It recognizes all such standards that produce performance meeting the requirements of its codes and through official representation, it cooperates with other organizations in developing standards under the procedures of the American Society for Testing and Materials, the National Fire Protection Association, and the United States of America Standards Institute.

The organization serves as co-sponsor with other organizations on USASI Sectional Committees for Administrative Requirements for Building Codes; Building Code Requirements for Reinforced Gypsum Concrete; Safety Code for Grandstands, Tents and Places of Assembly; and the National Plumbing Code. It is officially represented on the USASI Construction Standards Board and 18 sectional committees dealing with construction materials and safety regulations. It is also represented on 3 committees of the National Fire Protection Association and 2 committees of the American Society for Testing and Materials.

BUSINESS EQUIPMENT MANUFACTURERS ASSOCIATION.

Harry C. Anderson, President, 235 East 42nd Street, New York, N. Y. 10017

This Association is the approved sponsor of standardization programs in the computer and information processing and office machine fields. These programs are conducted under regulations and procedures of the United States of America Standards Institute. BEMA also sponsors United States participation through USASI in comparable international standardization programs under the auspices of the International Organization for Standardization.

The Data Processing Group of BEMA sponsors USASI Sectional Committee X3 for Computers and Information Processing, which is divided into 7 subcommittees—Optical Character Recognition (X3.1), Coded Character Sets and Input-Output (X3.2), Data Transmission (X3.3), Common Programming Languages (X3.4), Vocabulary (X3.5), Problem Description and Analysis (X3.6), and Magnetic Ink Character Recognition (X3.7).

The Office Machines Group of BEMA sponsors USASI Sectional Committee X4 on Office Machines, which is divided into 9 subcommittees—Typewriters (X4-A1), Adding Machines and Calculators (X4-A2), Standard Accounting and Bookkeeping Machines and Cash Registers (X4-A3), Duplicating, Reproducing and Mailing Machines (X4-A5), Dictating Machines (X4-A6), Forms (X4-A7), Electrical Office Machines (X4-A8), and Keyboards (X4-A9).

**CALCIUM CHLORIDE INSTITUTE, W. E. Dickinson, President,
909 Ring Building, 1200 18th Street, N.W., Washington, D. C. 20036**

The primary object of the Institute is to sponsor research and distribute information relative to the uses of calcium chloride. The Institute also maintains an engineering staff for field service to all users. Although it does not itself prepare standards, the Institute has adopted for the use of its members the standard specifications for calcium chloride which are released by the American Society for Testing and Materials, the American Association of State Highway Officials, and other organizations. The Technical Panel of the Institute assists in the development, revision, use of specifications, and procedures for calcium chloride users.

The Institute maintains a research associate at the National Bureau of Standards in connection with studies of concrete. Through other research fellowships it sponsors work at universities to establish the effects of calcium chloride on soil, the merit of using calcium chloride-salt mixtures for winter maintenance work (including storage as well as applications of calcium chloride). As a result of this work, the Institute establishes standards for recommending the uses of calcium chloride to various industries including concrete, highways, minerals and refrigeration. Uses of calcium chloride include its use as liquid ballast, dustproofing, fire protection, freezeproofing, ice melting, air drying and moisture retention.

The Institute also makes available free on request any literature pertaining to recommended practices for using the product. Nonprofit in nature, the Calcium Chloride Institute's purpose is to supply such information for all calcium chloride users which will enable them to achieve best results with the product.

**CALIFORNIA FRUIT EXCHANGE, F. M. Small, General Manager,
P. O. Box 2038, Blue Anchor Building, Sacramento, California 95809**

This Exchange is a growers cooperative marketing organization which markets the fruit of some 3,000 grower members who are organized into approximately 74 local associations and large contract shippers. It has developed grade specifications for fruits and grapes, together with approved and recommended methods of packing. Fruits which meet the standard grades of the Exchange are permitted to carry the trademark label on each individual container.

For approximately 25 years this organization has maintained a Committee on Standardization, which cooperates with the field department in the development of grades and standards for marketing fresh deciduous-tree fruits and grapes.

**CALIFORNIA OLIVE ASSOCIATION, Miss Erline Hevel, Secretary,
461 Market Street, San Francisco, California 94105**

This organization has developed a number of olive size grades under which canned ripe olives are packed, shipped and sold. These grades are based on the California Ripe Olive Standardization Act, revised to 1961, which provides certain standards of quality, fill of container, and requirements for marking of olives packed in tin or glass containers.

CANNERS LEAGUE OF CALIFORNIA, M. A. Clevenger, Executive Vice-President, 9 First Street, San Francisco, California 94105

The League, a trade association of fruit and vegetable canners, was established in 1905.

It maintains a Standards Committee whose function is to cooperate in the formulation of Federal Specifications, U.S.D.A. Standards for grades of canned fruits and vegetables, and Food and Drug Standards of identity for various canned fruits and vegetables.

CANNING MACHINERY AND SUPPLIES ASSOCIATION, W. D. Lewis, Secretary-Treasurer, 7758 Wisconsin Avenue, N. W., Washington, D. C. 20014

The standardization activities of this organization are carried on in cooperation with associations dealing with the establishment of standards for materials used in canning purposes. It has cooperated with the National Canners Association and the Can Manufacturers Institute in the Standardization of sizes of tin cans and with the Glass Container Association of America in developing standard sizes of glass containers.

CANVAS PRODUCTS ASSOCIATION INTERNATIONAL, Robert C. Mead, Executive Secretary, 224 Endicott Building, St. Paul, Minnesota 55101

This Association has a Standards Committee which is currently reviewing product areas within this industry to determine if a need exists for standards. Areas under consideration include camping tents, truck covers, awnings, and pleasure boat covers.

In 1963 CPAI prepared and promulgated CPAI-63, a standard for canvas tarpaulins made of single filling cotton duck. All levels of the industry cooperated: Mills, finishers, jobbers and manufacturers. With success of the CPAI-63 standard, the Association's standardization activities will receive increased attention in the future.

CAST IRON PIPE RESEARCH ASSOCIATION, Wallace T. Miller, Managing Director, Suite 3440, Prudential Plaza, Chicago, Illinois 60601

This organization is cooperating with sectional committees of the United States of America Standards Institute in developing standard specifications for cast iron pipe and fittings; preparation of a code for pressure piping; and development of flange standards. At its own test sites it carries on corrosion tests on various pipe materials and on pipe coatings.

This Association has adopted a symbol—a letter "Q" with a check—which is stenciled on each length of pipe produced by the members of the Association. Its purpose is to identify the pipe as cast iron pipe. The Association states that the reason for the adoption of the symbol is the fact that it desires to advertise cast iron pipe to the public, even though it is not purchased directly by it except through taxes. It is felt that in the absence of an identification mark the public would have no way of knowing whether the pipe being installed in their streets was cast iron pipe or some other type of pipe.

CAST IRON SOIL PIPE INSTITUTE, Jerome O. Hendrickson, Executive Vice President, 1824-26 Jefferson Place, N.W., Washington, D. C. 20036

This Institute has developed standards for cast iron soil pipe and fittings which are accepted throughout the United States. It is the sponsor for Commercial Standard CS188-59 Cast Iron Soil Pipe and Fittings, which sets forth dimensions and weights, and provides interchangeability between all manufacturers' pipes and fittings.

A new product, Hubless Cast Iron Sanitary System, with "CISPI" No-Hub Pipe and Fittings, is covered by the Institute's Standard No. 301-65T.

CASTER AND FLOOR TRUCK MANUFACTURERS' ASSOCIATION, R. E. Pritchard, Executive Secretary, 3525 West Peterson Road, Chicago, Illinois 60645

Manufacturers in this Association produce industrial casters, wheels, and manually operated materials handling equipment.

CFTMA has published separate product standards for molded-on wheels, plastic wheels, polyurethane wheels, metal wheels and all rubber wheels. In addition, a comprehensive caster standard has been published as well as standards for trailer trucks, platform trucks and two-wheel hand trucks.

CEMENTED CARBIDE PRODUCERS ASSOCIATION, Allen P. Wherry, Commissioner, Thomas Associates, Inc., 2130 Keith Building, Cleveland, Ohio 44115

The standardization activities of this Association are carried on by the Standards Committee and Technical Committee. The work of the Standards Committee has been confined to the establishment of dimensional standards for products manufactured by Association members. The activities of this committee have resulted in the issuance of the following USA Standards: USA Standard Specifications for Throw-Away Carbide Inserts for Cutting Tools, B80.1-1959; Carbide Blanks for Positive and Negative Rake Precision Inserts, Throw-Away Type, B80.1a-1961; Carbide Blanks and Cutting Tools, Single-Point, Carbide-Tipped, Roller Turner Type, B81.1-1961; Carbide Tipped Masonry Drills and Blanks for Carbide Tipped Masonry Drills, B82.1-1962; Blanks for Carbide Burs, B83.1-1962; Carbide Blanks for Twist Drills, Reamers, End Mills, and Random Rod, B85.1-1963; and Carbide Nibs and Dies for Drawing Round Wire and Bars, B103.1-1964. The organization has also developed in cooperation with the U.S. Department of Commerce, Simplified Practice Recommendation R263-60 for Standard Shapes, Sizes, Grades, and Designations of Cemented Carbide Products.

The Technical Committee is concerned with the development of recommended test procedures to be utilized for the measuring of physical properties of cemented tungsten carbide. Ten such procedures have thus far been developed, all of which are printed in the format used by the American Society for Testing and Materials

and are submitted to that agency with a request for promulgation. The Association is represented on the USASI Sectional Committee B94, Small Tools and Machine Tool Elements, and is a member of the Mechanical Standards Board.

CEREAL INSTITUTE, Andrew Duncan, President, 135 South LaSalle Street, Chicago, Illinois 60603

This Institute, founded in 1943 and consisting of manufacturers of breakfast cereals, is devoted to the betterment of national nutrition. In compliance with the law and for the good of the consumer, CI has established Principles of Good Practice for the packaging of breakfast cereals. These cover the proper fill of cereal packages and declaration of net contents thereon.

CERTIFIED MILK PRODUCERS ASSOCIATION OF AMERICA, Charles Speaks, Secretary, 405 Lexington Avenue, New York, N. Y. 10017

Standardized methods for the production and distribution of "Certified Milk," as formulated by the American Association of Medical Milk Commissions, have been adopted by this organization.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, Alfred A. Mulliken, Secretary, 50 East 41st Street, New York, N. Y. 10017

Founded in 1914, the Association now has a membership of approximately 525 companies.

Its work in standardization is divided among six Divisions, viz. Aerosol; Automotive; Disinfectant and Sanitizers; Insecticides; Detergent and Cleaning Compounds; and Waxes, Polishes and Floor Finishes.

The Automotive Division does not cover fuel products used in the combustion chambers of motors; the Insecticide Division deals with household and industrial products; the Detergent Division concerns itself with industrial and institutional materials.

The CSMA has developed and offers: an Official Test Insecticide (for use in the Peet-Grady Test); an Official Test Aerosol (insecticidal); Antifreeze Corrosion Test Metal Coupons; floor linoleum, asphalt tiles (Official Test Linoleum, Official Test Asphalt Tile) for the comparative testing of floor waxes; and charts for use in slip testing machines. Other materials for standardized testing are being developed, including Auto Paint Test Panels and Peptone-Sicum Test Media for Disinfectants.

CSMA assisted in the development of Commercial Standards for: Liquid Hypochlorite Disinfectant, Deodorant, and Germicide CS68-38; Pine Oil Disinfectant CS69-38; Phenolic Disinfectant (Emulsifying Type) CS70-41; Phenolic Disinfectant (Soluble Type) CS71-41; Household Insecticide (Liquid Space Spray Type for Flying Insects) CS72-54.

The Association publishes methods of analysis developed by Scientific Committees of the organization.

**CHLORINE INSTITUTE, Robert L. Mitchell, Jr., Secretary, 342
Madison Avenue, New York, N. Y. 10017**

All standardization work of this organization is carried on by its Committee on Container Specifications and Safety. The function of this Committee is to develop, and to keep under constant revision, specifications covering certain items used in the chlorine industry.

The Institute has developed and adopted specifications for safety valves, angle valves, excess flow valves and manway covers, for chlorine tank cars, tank trucks and tank barges, as well as valves and fusible plugs for chlorine cylinders and ton containers.

The Committee has also developed recommended methods for the unloading of chlorine tank cars, maintenance of tank car valves, analysis of chlorine for impurities and design of stationary storage tanks.

The Institute cooperates actively with the Compressed Gas Association in matters relating to the safe transportation of compressed gases, and with the Association of American Railroads in the development of tank car specifications and approval of tank car designs.

**CLAY PRODUCTS ASSOCIATION, Robert G. Scott, Vice President
and General Manager, P. O. Box 172, Barrington, Illinois 60010**

This is a nonprofit organization, formed in 1917, to advance and promote the use of clay products by means of field engineering promotion, research, advertising, publicity, and to aid in preparation of national specifications and codes in cooperation with the Government and engineering organizations. The members of the Clay Products Association are chiefly located in the middle west. Vitrified clay sewer pipe is the principal product. The Association prepares and publishes engineering handbooks, educational movies, and brochures to aid engineers and city officials in methods of financing and preparing data for bond elections for municipal improvement.

The members of the Clay Products Association cooperate in the national research program carried out by the National Clay Pipe Manufacturers Research Laboratory in Crystal Lake, Illinois.

The publications of the Association are: "Clay Pipe Engineering Manual," "Handbook of Pipe Laying and Inspection," "Planning for New Sewers," "Tentative Standards," "Handbook of Perimeter Heating," and "Sewer Facts."

The Clay Products Association cooperates with the American Society of Civil Engineers, American Society for Testing and Materials, American Association of State Highway Officials, the Federal Government, and other specification and code making bodies in the development of standards and specifications covering the products manufactured by its members.

**CLAY SEWER PIPE ASSOCIATION, E. M. Masterson, Executive
Vice President, 300 Cedar Boulevard, Pittsburgh, Pennsylvania
15228**

This Association is a regional nonprofit organization incorporated in 1939. The Association members are vitrified clay pipe

manufacturers in the northeastern part of the United States. The objectives of the organization are to advance the merits and use of vitrified clay sewer pipe and kindred products.

Regionally located District Engineers are assigned throughout the area covered by the Association. Overall supervision as well as compilation of data is handled from the Pittsburgh office by the Executive Vice President.

Research is conducted in two programs: (1) by individual manufacturers in their own laboratories in the many phases of ceramic pipe bodies and jointing, and (2) by contribution, which along with those from the other 3 regional Associations, allow the National Clay Pipe Institute to maintain and operate a laboratory located at Crystal Lake, Illinois. Research programs are likewise occasionally conducted at various independent research laboratories and universities.

The Association conducts research programs on the improvement of ceramic pipe bodies, and improvement of pipe joints and jointing materials.

It publishes the "Clay Pipe Engineering Manual" for engineers, city and State officials, and architects. Also, "Inspector's Handbook" and Technical Bulletins are issued on various subjects pertaining to vitrified clay pipe and kindred products.

The Association makes available colored 16 mm films which show the details of clay pipe manufacturing, construction data, and accompanying sewer appurtenances. Two color-sound motion pictures are available to help promote sewer construction programs and improve construction practices. Several pamphlets on the need of sanitary waste handling and treatment are offered to assist municipal agencies.

The Clay Sewer Pipe Association is active in the work of the American Society for Testing and Materials, the United States of America Standards Institute, and the American Association of State Highway Officials. It also assists in the development of Federal Specifications.

COLOR ASSOCIATION OF THE UNITED STATES, (Formerly Textile Color Card Association of the U. S.), Midge Wilson, Executive Director, 200 Madison Avenue, New York, N. Y. 10016

This nonprofit organization was established in 1915 to issue color forecasts. Its scope includes market research and color consultation service. Seasonal forecasts are issued twice a year, plus special color cards for men's wear, men's socks, millinery, hosiery, gloves, women's socks and anklets. Membership, by companies and individuals around the world, represents all fields such as fabrics, paints, wallpaper, plastics, floor coverings, automotive, aeronautical, china, chemicals, dyestuffs, cosmetics, etc.

This Association created the Standard Color Card of America. Certain Government and most industrial color requirements are specified by reference to standards in the current 9th Edition. The Association issued Branches & Agencies, Arms & Services Color Card; U. S. Army Thread Color Card and Tape Color Card in cooperation with the Quartermaster Corps. It also worked with the Superintendent of the U. S. Air Force Academy in issuing its official colors, and has compiled standards for official flags for the

U.N., foreign countries, States, colleges and universities. Scientific data on the Standard 9th Edition colors and the armed services colors is given in the National Bureau of Standards Research Paper RP1700.

COMMISSION ON STANDARDS AND ACCREDITATION OF SERVICES FOR THE BLIND, Alexander F. Handel, Director, 15 West 16th Street, New York, N. Y. 10011

Established in 1963 at the initiative of the American Foundation for the Blind, the Commission was charged with the responsibility of developing a national system of voluntary accreditation designed to improve the quality of specialized services for blind persons. As a prerequisite to the establishment of an accreditation program, the Commission appointed 12 technical committees to develop standards. Standards have been developed for the following areas: physical facilities, education, library services, orientation and mobility services, rehabilitation centers, sheltered workshops, social services, vocational services, agency function and structure, fiscal and service accounting, fund raising and public relations, and personnel administration.

The Commission's work will soon be completed with the publication of standards and the establishment of a permanent organization dedicated to the management of a national system of voluntary accreditation of local services for the blind, and to the periodic revision of existing standards as well as the formulation of new standards as they are needed.

COMPRESSED GAS ASSOCIATION, F. R. Fetherston, Managing Director, 500 Fifth Avenue, New York, N. Y. 10036

This Association concerns itself only with technical matters relating to safety in the transportation, storage, handling, and to some extent, in the use of the compressed gases. It publishes a series of pamphlets relating to the gases and to matters pertinent to their storage and handling. It has developed a number of industry standards, some of which have been processed through the United States of America Standards Institute and endorsed as USA Standards. This Association cooperates with additional technical societies in related industries, such as the National Fire Protection Association, American Society for Testing and Materials, and others.

CONCRETE REINFORCING STEEL INSTITUTE, F. S. Clough, Managing Director, 228 North LaSalle Street, Chicago, Illinois 60601

The primary objectives of this organization are to foster and increase the use of reinforced concrete construction; to carry on research work, publish and disseminate information as to the safe and proper materials to be used in reinforced concrete construction, and the proper methods of their use; to aid and promote the standardization of materials and nomenclature, the standardiza-

tion of specifications and building codes, and the standardization of engineering practice methods of fabrication.

The Institute maintains three committees which deal with work in standardization and simplification: Engineering Practice, Bar Support, and Concrete Joist Construction. Each conducts extensive studies and tests in its respective area through independent research firms, universities, field work and the like.

The Committee on Engineering Practice has been responsible for publication of several technical books. The "Manual of Standard Practice," now in its sixteenth edition, presents data conforming to all of the latest codes affecting estimating, detailing, fabricating and contracting for reinforcing materials. Published periodically is the "Design Handbook" which contains up-to-date data for the engineer's use in designing with reinforced concrete. The latest 700-page volume conforms to provisions of the 1963 ACI Building Code and eliminates much of the routine in designing structures using 60,000 psi yield steel and 3,750 psi concrete. It is particularly useful in preliminary estimating, for establishing sizes and clearances and for comparing different types of construction. "CRSI Recommended Practice for Placing Reinforcing Bars," was first issued in 1959. This 300-page book summarizes the best of accepted practices for the placement of reinforcing bars, welded wire fabric and their supports in the exact spot where needed. The latest edition conforms to the 1963 ACI Building Code.

Additional noteworthy standardization accomplishments have been: (1) Initiated adoption by the U. S. Department of Commerce of Simplified Practice Recommendations R26 covering bar sizes, R53 covering spirals, and R87 for widths of concrete joist construction forms; (2) Acceptance by producing mills of the CRSI trademark "-N-" as a mark of quality on new billet steel; (3) Inspired the formulation and adoption of the first ACI Building Code.

The Institute sponsors or supports broad research and testing projects to determine safe working stresses for concrete reinforcing bars. It is a major contributor to the Reinforced Concrete Research Council of the Engineering Foundation, which, over the years has contributed significant research into better usage of the product.

The Institute maintains membership and actively participates in committee work of such national organizations as the American Society for Testing and Materials, American Concrete Institute, the American Welding Society, and other technical bodies. It also cooperates with various agencies of the Federal Government in connection with standardization work affecting the reinforcing steel industry, as well as with such groups as the Portland Cement Association, American Association of State Highway Officials, and the Highway Research Board.

CONSTRUCTION SPECIFICATIONS INSTITUTE, Ronald S. Ryner, Executive Director, 307 Dupont Circle Building, N.W., Washington, D. C. 20036

The purpose of the Institute is to improve construction specifications. Its work is not limited to building specifications but is concerned with specifications for all types of construction.

The membership consists of individuals who are interested in improving specifications such as architects, engineers, contractors, material suppliers, students, teachers, etc. In 1965, the Institute had a membership of about 7,000 and 65 Chapters throughout the United States.

CSI publishes a monthly magazine, "The Construction Specifier," which is distributed to members as a member service. The Institute also publishes technical studies dealing with specific portions of construction specifications. A series of standard specifications for workmanship has recently been started as a CSI project.

Most of the technical information is supplied by members working through CSI committee structures. Nonmembers are invited to contribute ideas by commenting on early drafts of CSI technical studies.

CONTRACTING PLASTERERS' AND LATHERS' INTERNATIONAL ASSOCIATION, Joe M. Baker, Jr., Managing Director, 1343 H Street, N.W., Washington, D. C. 20005

Standard specifications for lathing and plastering which may be incorporated into architects' construction specifications, have been formulated and adopted by this Association. These specifications have been revised and updated as of 1963, and the revisions have been approved by the Association's Technical Committee and Board of Directors. Included in the specifications are recommended practices for various types of lath, plastering and stucco, with requirements for materials, or the citing of standard specifications for materials.

The Association has established a joint committee with the OP&CMIA (Operative Plasterers' and Cement Masons' International Association) and with the WW&MLIU (Wood, Wire, and Metal Lathers' International Union) to establish standards of apprenticeship for plastering and lathing. It has also established a Manufacturers' Liaison Committee to improve communications between the Association and manufacturers and manufacturers' associations in the industry.

The Association is officially represented on committees C-7 Lime, C-11 Gypsum, C-20 Acoustical Materials, and E-6 Testing, of the American Society for Testing and Materials. It is also affiliated with the United States of America Standards Institute and other organizations.

The Association has an active Technical Committee which participates in joint meetings with technical committees of the Gypsum Association, Metal Lath Association, Perlite Institute, and other organizations.

The Association has established through cooperation with the international unions of the industry the National Bureau for Lathing and Plastering, 1725 K Street, N.W., Washington D. C. 20006, which is a national promotional organization.

CONTRACTORS PUMP BUREAU, Raymond E. Johnson, Secretary, 1957 E Street, N.W., Washington, D. C. 20006

This Bureau, with a membership of 14 firms engaged in manufacturing contractor-type pumps, establishes standards covering

the manufacture and operation of such pumps. It has published standards for both centrifugal and diaphragm pumps as well as "trash" pumps and submersible pumps. In addition, the Bureau publishes a Contractors' Pump Manual which is intended to give the user of pumps a complete collection of necessary information and statistics.

CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION,
R. C. Sollenberger, Executive Vice President, One Thomas Circle,
Washington, D. C. 20005

CEMA is actively interested in industrial standards and maintains an organization membership in the United States of America Standards Institute. It is also represented on standards committees of such organizations as the American Society of Mechanical Engineers and the American Mining Congress.

The Association publishes Book No. 101 Conveyor Terms and Definitions. It defines more than 1,400 conveyor types, parts, and related equipment. Preferred terms are accompanied by definitions.

In addition, CEMA has published the following standards: CEMA Standard No. 201-1960 Keys, Keyseats & Keyways, a standard of recommended dimensions and tolerances to meet the needs of conveyor manufacturers and other machinery producers; CEMA Standard No. 401-1962 Roller Conveyors—Non Powered, which establishes recommended engineering and application practice for package handling roller conveyors and offers a uniform nomenclature and certain dimensional standards; CEMA Standard No. 402-1964 Belt Conveyors, establishes recommended design and application engineering practice for package handling belt conveyors and includes a uniform nomenclature and certain dimensional standards; CEMA Standard No. 403-1965 Belt Driven Live Roller Conveyors, establishes recommended design and application engineering practice for this popular type of conveyor; CEMA Standard No. 404-1965 Chain Driven Live Roller Conveyors, establishes recommended design and application engineering practice for a second form of live roller conveyor; and CEMA Standard No. 300-1963 Screw Conveyors, includes a series of recommended dimensional standards for major screw conveyor components and tables for troughs, trough ends, screws (helicoid and sectional flight), cut-flight, cut-and-folded flight, flange bolt spacing, paddles, ribbon flight, and plain discharge spouts.

COOLING TOWER INSTITUTE, Edward L. Bishop, Manager, 4242
Richmond Avenue, Houston, Texas 77027

The Institute, organized in 1950, is a nonprofit, self-governing association of manufacturers and owners of industrial water cooling towers. Its standards program is planned around the development of a series of individual standards which, taken together, constitute a specification for a CTI Code Tower. CTI Code Tower Standard Specifications which have been published are: Bulletin STD-103, Redwood Lumber Specifications: Recommended grades, grading rules, and allowable design stresses for redwood lumber; Bulletin ATP-105, Acceptance Test Procedure: Methods and

instrumentation for determining water cooling capability of mechanical draft towers; Bulletin NCL-109, Nomenclature: Terms and definitions describing cooling towers and their performance; Bulletin STD-111, Gear Speed Reducers: Rating practice and operating considerations for use with propeller type fans; Bulletin WMS-112, Pressure Preservative Treatment of Lumber: Minimum retentions and penetrations in application of AWWA treatment standards; Bulletin STD-114, Douglas Fir Lumber Specifications: Grades, recommended stress, nonframework grades and grading rules in application of WCLA grades; Bulletin STD-115, Southern Pine Lumber Specifications: Grades, recommended stress, nonframework grades and grading rules in application of SPIB grades; Bulletin STD-119, Timber Fastener Specifications: Recommended material, manufacturing limitations, design requirements and allowable loads for timber fasteners.

Standards in preparation by CTI committees include fan motors and a cement asbestos standard.

CORDAGE INSTITUTE, Frank J. Haas, Chairman, Technical Committee, 350 Madison Avenue, New York, N. Y. 10017

The Institute's Technical Committee serves as an advisory committee to the Cordage Industry and cordage users. It cooperates with the American Merchant Marine Association, American Society of Mechanical Engineers, American Society for Testing and Materials, Bureau of Yards and Docks, U. S. Navy and all Government agencies publishing Military and Federal Specifications on cordage. In addition, the committee has developed a Standard Method for Testing Synthetic Ropes.

CORK INSTITUTE OF AMERICA, Arthur L. Faubel, Director, 342 Madison Avenue, New York, N. Y. 10017

The Institute cooperates with Federal Government agencies in the preparation of Federal Specifications for cork products. It also represents the American cork products industry with the United States of America Standards Institute, and from time to time it has collaborated with Government departments in connection with regulations concerning cork products. The Institute also acts as a liaison between the American cork industry and the U. S. Department of Commerce in connection with the Department's interest in raw cork and manufactured cork products.

CORN INDUSTRIES RESEARCH FOUNDATION, William J. Hoover, Administrative Vice President, 1001 Connecticut Avenue, N.W., Washington, D. C. 20036

The Foundation is a nonprofit national organization serving 11 corn refining companies in the United States. Governed by a Board of Trustees, 2 from each of the 11 corporate members, the Foundation conducts industrywide programs of research, technical service and public information. Its varied activities include the development of standardized procedures, terminology, instrumen-

tation, methods of measurement, and the like on behalf of industry members and the consumers of industry products.

The formulation of standardized analytical methods for use within the industry is a continuing mission of the Foundation's Technical Advisory Committee. A TAC subcommittee compiled a reference volume, Critical Data Tables, available from the Foundation at cost.

Another group, the Technical Service Committee, gives attention to broad technical-service problems. It recently prepared standard definitions for starch hydrolysates and has supervised the compilation of data in such semitechnical booklets as Corn Starch, Corn Syrups and Sugars, Corn Oil, and Corn Gluten Feed and Meal, obtainable from the Foundation without charge.

COUNCIL FOR NATIONAL COOPERATION IN AQUATICS,

Jackson M. Anderson, Chairman, 1201 Sixteenth Street, N.W., Washington, D. C. 20036

The Council was organized in 1951 for the purpose of providing a setting in which official representatives from national organizations with a primary concern in the field of aquatics could come together to discuss common problems, engage in aquatic projects of mutual benefit, and improve aquatic standards throughout the nation. The important work of CNCA in the development and improvement of aquatic standards has been centered around the following concerns: (1) the development and promotion of standards for the training of lifeguards; (2) the development and promotion of standards for the construction and operation of swimming pools; (3) the support and promotion of scuba standards developed by the National Council of YMCA's (4) the development and promotion of aquatic leadership standards; (5) the development and promotion of standards for the training of diving judges; and (6) the development and promotion of standards for planning, conducting, and evaluating aquatic workshops and conferences.

In its efforts to develop and improve aquatic standards, CNCA has produced the following materials: "Lifeguard Training—Principles and Administration," 191 pages, 1964; "The New Science of Skin and Scuba Diving," 208 pages, 1962; and "Training the Diving Judge," 16 mm. film, silent, black and white 17½ min.

COUNCIL OF NATIONAL LIBRARY ASSOCIATIONS, Bill M.

Woods, Chairman, 31 East 10th Street, New York, N. Y. 10003

This Association includes in its membership 13 major library associations in the United States. Nearly all of these associations are concerned with standardization in various aspects of librarianship.

CNLA's principal concern with standardization is as sponsor, since November 1950, of United States of America Standards Institute Sectional Committee Z39 on Library Work and Documentation. The work of this committee has been assigned to 13 subcommittees having the following titles: Machine Input Records, Periodical Title Abbreviations, Bibliographic References, Transliteration, Abstracts, Library Statistics, Terminology, Arrangement

of Periodicals, Program, Indexing, Trade Catalogs, Classification, and Filing. USASI Approved Standards for Indexes (1959) and Periodical Title Abbreviations (1963) have been published, and a standard for Trade Catalogs has been approved. The committee also represents U. S. opinion on any subject area within its competence in meetings of the International Standards Organization. In this connection there is considerable work in the areas of Transliteration and Terminology.

CRAYON, WATER COLOR AND CRAFT INSTITUTE, Elizabeth Clarkson, Executive Secretary, 420 Lexington Avenue, New York, N. Y. 10017

The Institute gives school and other purchasers of children's art materials, information concerning minimum quality and nontoxic requirements, and also packaging specifications. In connection with these requirements and specifications, the Institute has worked in cooperation with the Commodity Standards Division (now Product Standards Section) of the National Bureau of Standards, Department of Commerce, to develop Commercial Standard CS130-60 Color Materials for Art Education in Schools, and Simplified Practice Recommendation R192-63 Crayons and Related Art Materials for School Use.

The Institute has also established a Certified Products Seal which gives assurance of quality and nontoxicity so that no known toxic materials in sufficient quantities to be injurious to the human body are contained in the products of its members which bear this Seal. The products covered by the Seal are crayons, chalk, finger paints, modeling clay, liquid and powdered tempera and cake and semi-moist water colors.

DAIRY AND FOOD INDUSTRIES SUPPLY ASSOCIATION, Joseph S. Cunningham, Executive Vice President, 1145 19th Street, N.W., Washington, D. C. 20036

The Technical Committee of this Association is one of three major participants in the joint development of 3-A Sanitary Standards for the dairy industry. 3-A Sanitary Standards are voluntary standards which establish sanitary criteria for dairy processing equipment. Approximately 30 sanitary standards have been published to date and half that many new standards are pending. Standards published include those for fittings, pumps, storage tanks, transportation tanks, heat exchangers, pasteurizers, and freezers.

Participating jointly in this standards program are representatives from U. S. Public Health Service, International Association of Milk, Food and Environmental Sanitarians, and The Dairy Industry Committee.

DATA PROCESSING MANAGEMENT ASSOCIATION, R. Calvin Elliott, Executive Director, 505 Busse Highway, Park Ridge, Illinois 60068

This is an organization both national and international in scope, composed of 20,000 data processing and systems personnel engaged in the use and management of computers and related

equipment. DPMA assists in the development of standards in the data processing field through its membership and active participation on United States of America Standards Institute Committee X3 on Computers and Information Processing. Through this membership and through DPMA's official monthly publication, "Journal of Data Management, the Association encourages and publicizes efforts toward the development of standards in data processing equipment, terminology, data codes, analysis, documentation and computer programming languages.

DPMA publishes all proposed standards of the various X3 Subcommittees for review and comment by its members. These are discussed at meetings of X3 where the DPMA delegate is empowered to register DPMA's vote.

DIAMOND FRUIT GROWERS, G. C. Crossland, General Manager, Hood River, Oregon 97031

This association handles fresh fruits such as apples, pears and cherries, the grades and standards of which are fixed by the State and Federal Departments of Agriculture. It also handles canned pears, apples, apple juice, apple sauce, vinegar, and cherries, the standards of which are fixed by the Food and Drug Administration, and the U. S. Department of Agriculture. Changes in standards are first worked through Standards Committees of Northwest Cannery and Freezers Association, and the National Cannery Association.

This association cooperated with the National Bureau of Standards and the apple wraps industry in the development of a quality standard for dry and oiled paper apple wraps. This resulted in the establishment of Commercial Standard CS44-32, which was published by the National Bureau of Standards.

DIAMOND WALNUT GROWERS, A. L. Buffington, General Manager, 1050 South Diamond Street, Stockton, California 95201

Following investigation and report by its Evaluation Committee, this association, through its Board of Directors, adopted specifications covering all the different packs of walnuts sold, both shelled and unshelled. These specifications are closely similar to those established under the Federal Walnut Marketing Agreement in effect under the Agricultural Adjustment Administration, and are also similar to standards for United States grades for both shelled and unshelled walnuts.

DIESEL ENGINE MANUFACTURERS ASSOCIATION, Frank P Anderson, Secretary, 122 East 42nd Street, New York, N. Y. 10017

This Association has prepared and issued a book entitled, "Standard Practices for Stationary Diesel and Gas Engines." This book deals with stationary engine installations, definitions, types of equipment and performance of diesel, dual fuel, and gas engines for stationary applications. It has also issued another publication entitled, "Marine Diesel Standard Practices." The latter covers applications in marine service.

The purpose of these books is to be of service to diesel and gas engine users, prospective buyers and consulting engineers. The

information in both volumes represents an up-to-date consensus of recommendations developed by engine manufacturers, parts and accessory manufacturers, oil companies and other associations and societies having an interest in internal combustion engine power plants of the types described in the two titles.

**DISTILLED SPIRITS INSTITUTE, Robert W. Coyne, President,
1132 Pennsylvania Building, Washington, D. C. 20004**

The development of standards of identity and quality constitutes an important activity of this Institute. Through its various committees, composed of qualified technicians of member companies, and through its Washington staff, the Institute carries on continuous studies of appropriate standards of identity for distilled spirits and cooperates with the Alcohol and Tobacco Tax Division of the Internal Revenue Service in the adoption of official standards.

Through its Technical Committee, the Institute engages in studies and experiments designed to formulate standard analytical methods. Through the Distillers Feed Research Council, a continuing effort is made in the field of standardization of production methods and controls of distillers dried grains, as well as in the standardization of the end product.

**DRIED FRUIT ASSOCIATION OF CALIFORNIA, W. W. Dada,
Technical Director, 303 Brokaw Road, Santa Clara, California 95050**

Since 1909 this Association has established grade standards for dried fruits and raisins. These standards comply with both the domestic and foreign need to know that goods shipped comply with contract descriptions. The standards of this type defy explicit definition since the goods are inspected according to the buyer's specifications and his acceptance of the merchandise. Certificates issued as a result of this type of inspection have achieved world-wide acceptance and establish a prime focal evidence of a "delivery" by the shipper.

This organization has for many years participated in the establishment of written specifications defining defects and certain quality standards as set forth in U.S.D.A. grades and industry specifications. It also acts as the research agency in developing such standards as may be required for new products developed in the dried fruit industry. One of the most recent endeavors in the field of standards was the development of sanitation standards for the World Health Organization of the United Nations.

Services rendered by this Association now include prune, walnut, and fig inspections as required by Federal or State Marketing Orders governing these products, and under private contract, inspections of the majority of dried apples and cut fruits produced in California.

**EDISON ELECTRIC INSTITUTE, H. E. Kent, Director of
Engineering, 750 Third Avenue, New York, N. Y. 10017**

This Institute is the trade association of the investor-owned electric light and power companies. The major part of its standardization activities is carried out through representation on

some 100 sectional committees of the United States of America Standards Institute. Most of these are concerned with standards for electric utility equipment and customers' appliances and also codes involving industry practices, such as the National Electrical Safety Code. The Institute also carries on a certain amount of standardization relative to electric utility equipment with other industry associations such as the National Electrical Manufacturers Association. Institute representatives are likewise active in standardizing activities of the American Society for Testing and Materials and the National Fire Protection Association.

Certain committees of the Institute issue a series known as "Suggestions for Specifications," intended particularly for use of the member companies as an aid in preparing their own specifications for purchase of material. The Transmission and Distribution Committee has issued some 50 of these, covering various items of line hardware, insulators, and street lighting equipment. Other committees have issued several relating to watt-hour and demand meters and safety equipment. The titles of these various specifications are shown in the "EEI Price List of Publications," available from the Institute.

ELASTIC FABRIC MANUFACTURERS INSTITUTE, E. B. Pomeroy, Executive Director, Box 710, New London, Connecticut 06321

This organization has developed five standards or guides, which are briefly described as follows: (1) Woven Waistband Elastic Minimum Performance Standard covers woven elastic for men's and boys' underwear shorts in widths of 1 in., $1\frac{1}{4}$ in. and $1\frac{1}{2}$ in. It includes complete test procedure and measures of performance for original elongation, original tension, and for tension loss under heat. (2) Braided Waistband Elastic Quality Performance Standard A-1 covers elastic braid in widths of $15/32$ in. and $1/2$ in. for use in waistbands of women's panties and half slips. Complete test procedure is given to measure performance for original tension, ultimate elongation and tension loss under heat. (3) Classification Guide for Use of Woven Elastic in Outerwear Waistband refers to woven waistband elastic used to hold up trousers, shorts, etc. It sets forth characteristics of original tension, original minimum stretch and minimum width for the categories of light weight, medium weight and heavy weight fabric use. Reference is also made to the characteristics of resistance to heat, resistance to chlorine, resistance to drycleaning and colorfastness. (4) Schedule of Width Tolerances for Woven Elastic Fabrics establishes width tolerances, based upon requirements of the overwhelming majority of purchasers of woven elastic. The tolerances cover elastic from $1/4$ in. in width to 24 in. in width. (5) Tolerances on Width and Stretch of Elastic Braid cover $1/8$ in. to over 1 in. wide elastic braid. The stretch tolerance is set forth and explained by an example.

ELECTRIC OVERHEAD CRANE INSTITUTE, Joe H. Peritz, Executive Secretary, One Thomas Circle, Washington, D. C. 20005

This organization has adopted standard specifications for standard industrial service electric overhead traveling cranes. It also

cooperated with the Bureau of Yards and Docks of the Navy Department in the development of standards in connection with electric overhead cranes. The Institute is represented on the United States of America Standards Institute's sectional committee on Safety Code for Cranes, Derricks, and Hoists.

ELECTRICAL APPARATUS SERVICE ASSOCIATION, August A. Baechle, Executive Vice President, 7330 Carondelet Avenue, St. Louis, Missouri 63105

This Association has developed the following standards for use by its 1500 member firms throughout the United States and Canada: (1) Electric Motor and Generator Rebuilding Standards—for integral horse power motors and electrical machinery and equipment one to one thousand KVA; (2) Transformer Rebuilding Standards—applying only to transformers completely rewound; (3) Rewinding Standards for Single Phase Induction Motors—for ratings up to and including 10 H.P., 300 volts, Class A insulation; and (4) Rewinding Standards for Three Phase Induction Motors—for ratings up to and including 200 H.P., 600 volts, Class A insulation.

ELECTROCHEMICAL SOCIETY, Ernest G. Enck, Executive Secretary, 30 East 42nd Street, New York, N. Y. 10017

The standardization work of this organization is carried on largely by committees appointed to deal with primary and secondary batteries, alkali and chlorine, corrosion, power, electrochemistry of gases, and insulating materials.

Through its several committees, the Society cooperates with the National Electrical Manufacturers Association and the National Bureau of Standards in the formulation of standard tests for dry cells.

It also cooperates with the United States of America Standards Institute in the formulation of USA Standard specifications for dry cells and batteries, and on the following work: Definitions of electrical terms; standard scientific and engineering symbols and abbreviations; and graphical symbols and abbreviations used on drawings. The Society's cooperative work is also being carried on with the American Society for Testing and Materials in determining the resistances to corrosion of various metals and alloys.

ELECTRONIC INDUSTRIES ASSOCIATION, James D. Secrest, Executive Vice President, 1721 DeSales Street, N.W., Washington, D. C. 20036

Approximately 200 Engineering Committees, covering areas of consumer products, industrial electronics, Government equipment and component parts, and staffed by industry representatives, develop material for standardization which is distributed as Standards Proposals to all member companies and many others (currently about 1,500) for comment and criticism. All replies received are considered by the originating group, and committee efforts are directed to resolving adverse comments either by addi-

tional contact with the objector, or by modification of the Standards Proposal. Any changes to the Standards Proposal, other than editorial, require a resubmission to industry.

A complete dossier of the Standards Proposal, including a tabulation of companies responding and disposition of comments, is then submitted to the EIA General Standards Committee. This committee, acting as a judicial body, evaluates the comments and votes on the acceptability of the Proposal as an EIA Standard. Upon acceptance, the Standard is published, distributed to member companies, and made available to industry by listing in the index of EIA Standards.

Generally all standards are reviewed at least every five years and are either reaffirmed or modified using the Standards Proposal procedure.

Those standards having a broader interest are submitted to the appropriate Sectional Committee of the United States of America Standards Institute for consideration as USA Standards.

There are approximately 200 standards currently available, covering all types of components (capacitors, resistors, transformers, waveguides, printed circuits, sockets, crystals); communications equipment and systems (microwave relay, mobile, airborne, broadcast and television); electron tubes and semi-conductor devices; sound equipment (speakers, microphones, magnetic recording equipment, records); wire; cables, and transmission lines; preferred numbers and colors for coding, modular dimensions, racks and panels, etc. Recently work has also been initiated in the areas of integrated circuits and microelectronics.

In addition, a variety of test charts have been standardized and made available for checking resolution, linearity, and registration of television and facsimile systems.

The Association also sponsors the Electron Tube Council of the Joint Electron Device Engineering Council (JEDEC), and cosponsors with the National Electrical Manufacturers Association (NEMA) the Semiconductor Device Council of JEDEC. The processing of items for standardization from JEDEC is handled in the same manner as described above. The EIA Engineering Office also administers the JEDEC type designation system which makes possible the interchangeability of electron tubes and semiconductors from many sources of manufacture.

Committees of the Association maintain close liaison and actively cooperate with related groups in other standardizing bodies such as the Institute of Electrical and Electronics Engineers, United States of America Standards Institute, National Electrical Manufacturers Association, American Society for Testing and Materials, National Machine Tool Builders Association, and others.

Military standardization efforts include liaison and cooperation with Governmental agencies of the Department of Defense and the individual military services, and include the submission of industry recommendations for new or modified Military Standards and Specifications.

Other Governmental Standardizing liaison is maintained with the Federal Communications Commission, Federal Trade Commission, and the Federal Civil Defense Administration.

International standardization is accomplished by EIA participation in the activities of the U. S. National Committee of the International Electrotechnical Commission (IEC). EIA presently serves as coordinator for all of the U. S. participation in the electronics committees of the IEC.

ENGINEERING FOUNDATION—WELDING RESEARCH COUNCIL, K. H. Koopman, Director, 345 East 47th Street, New York, N. Y. 10017

The Welding Research Council was organized in 1935 by the Engineering Foundation and is now sponsored by the American Welding Society, Institute of Electrical and Electronics Engineers, American Institute of Mining and Metallurgical Engineers, American Society of Civil Engineers, American Society of Mechanical Engineers, Society of Naval Architects and Marine Engineers, American Society for Metals, and American Society for Testing and Materials.

The Welding Research Council is a realistic, flexible mechanism set up by interested engineering societies and trade associations to accomplish certain objectives. These objectives simply stated are: (1) to conduct needed cooperative research in welding and closely allied fields; (2) to disseminate research information; (3) to promote welding research in the universities; and (4) to provide a means for cooperation, interchange of ideas, and information with similar agencies abroad.

The Council disseminates the results of its own research work and that of many other affiliated organizations through its five regular publications, namely: Welding Research, Reports of Progress, Welding Research News, Bulletins, Welding Research Abroad.

In addition to the regular publications of the Council, pamphlets, books, and special reports are issued from time to time. All of these publications, which represent some \$3 million worth of research annually, are made available to subscribers and research workers.

The Council is currently administering the following research projects: Interpretive Reports, Weldability, Pressure Vessel Research, Resistance Welding, Structural Steel, Fatigue of Welded Joints, High Alloys, and Welding Procedures.

In addition to the engineering societies, the Council works closely with more than a dozen governmental departments, and such leading trade associations as the American Iron and Steel Institute, American Petroleum Institute, American Institute of Steel Construction, American Gas Association, Edison Electric Institute, Resistance Welding Manufacturers Association, and others.

ENTOMOLOGICAL SOCIETY OF AMERICA, R. H. Nelson, Executive Secretary, 4603 Calvert Road, College Park, Maryland 20740

The Committee on Insecticide Reference Standards of this Society is composed of four members, two representing the physiology, biochemistry, and toxicology of insects, and two representing crop protection entomology. It is the responsibility of this com-

mittee to act as the liaison group between the Society and the corporation packaging and distributing the reference standards. The committee, through its chairman, initiates and controls the contacts between the manufacturers of the pesticidal chemicals and the packaging-distributing corporation. Close control of the purity of the standards is maintained. Periodically the committee chairman prepares a list of the standards which is published in the "Bulletin of the Entomological Society of America."

FACING TILE INSTITUTE, John M. Aldworth, Executive Secretary, 333 North Michigan Avenue, Chicago, Illinois 60601

This Institute is composed of manufacturers of ceramic glazed structural facing tile, natural finish tile, and glazed brick. The Institute has engaged in the standardization of shapes, colors, and installation techniques. Recent efforts have resulted in publication of updated specifications, simplification of shapes, and standardized industry packaging for glazed and natural finish tile.

The Institute maintains liaison with the Structural Clay Products Research Institute, and Mason Contractors Association of America. There is a continuous program of testing and certification of all members' products covering surface appearance and finish conducted by Pittsburgh Testing Laboratories.

FACTORY MUTUAL ENGINEERING CORPORATION, G. F. Wahl, President, 1151 Boston-Providence Turnpike, Norwood, Massachusetts 02062

With district offices in 17 major industrial centers of the United States and Canada, this organization provides property and production-loss-prevention engineering service to industrial organizations insured in the eight companies of the Factory Mutual System. Standards developed by this organization from loss experience, engineering background, and industrial-scale research tests form the basis for its service. These numerous standards, including such subjects as installing automatic sprinklers, safeguards for flammable liquids, gases, dusts, industrial ovens and dryers, and protection of buildings against wind damage, are available to the public in handbook form.

An important group within the organization is the laboratories which, in addition to conducting the test portion of loss-prevention standards development, is an approval agency for equipment and materials concerned with property damage limitation. Items meeting their performance standards are listed in the Factory Mutual publication entitled "Approved Equipment and Materials for Industrial Protection." Most such items are marked by the manufacturers with a special identifying symbol to show that they are so approved.

Through memberships and committee representations, assistance is given to the standardization activities of other national scope organizations dealing with materials, equipment, and methods for industrial property and production-loss prevention. Included are such organizations as the United States of America Standards Institute, National Fire Protection Association, and American Society for Testing and Materials.

FARM AND INDUSTRIAL EQUIPMENT INSTITUTE, Douglas Hewitt, Executive Secretary and Treasurer, 410 North Michigan Avenue, Chicago, Illinois 60611

The FIEI Engineering Committee makes recommendations to the American Society of Agricultural Engineers and to the Society of Automotive Engineers for all standards required to provide safe operation and functional as well as mechanical interchangeability between different makes and models of farm tractors and PTO driven or rear mounted implements.

Standard recommendations developed by the Engineering Committee relate to hydraulic controls for trailing implements; power take-off specifications and operating requirements affecting both tractors and implements; 3-point hitch for tractors and implements; uniform controls for tractors and self-propelled implements and recommendations for providing safety on tractors and all types of implements.

The FIEI Committee on Fasteners develops standard recommendations on fasteners peculiar to the industry and represents the industry in standardization of many types of fasteners to effect economies through this means.

The FIEI Crop Dryer Manufacturers Council developed and recommended to the American Society of Agricultural Engineers specifications to rate and evaluate crop dryers and to promote efficiency and safety in the design, construction and use of heated-air crop dryers.

The FIEI Industrial Equipment Manufacturers' Council has developed and recommended for use standard definition specifications for industrial tractors, backhoes, loaders, fork lifts, dozers, rear-mounted blades, rippers and scarifiers, sickle barn and rotary mowers, winches, earth drills, mobile drop hammers, and hydraulic systems.

The FIEI Milking Machine Manufacturers' Council has agreed on ratings of vacuum pump capacity as accepted by the American Society of Mechanical Engineers and is developing standards on pipeline milkers to recommend to the Standards Committee of the American Society of Agricultural Engineers.

The Farm and Industrial Equipment Institute actively participates in work of the International Standards Organization through membership in the United States of America Standards Institute. It also cooperates closely with United States Government agencies in relation to inter-Governmental standards activities.

In addition, there are autonomous groups within FIEI such as the Barn Cleaner, Cattle Feeder and Silo Unloader Association and the National Sprayer and Duster Association, working on safety, design and installation standards for barn cleaners, silo unloaders and cattle feeders, and nomenclature for sprayers.

FEDERATION OF PAINT AND VARNISH PRODUCTION CLUBS, Robert W. Matlack, Executive Secretary, 121 South Broad Street, Philadelphia, Pennsylvania 19107

The Federation is the technical society of the decorative and protective coatings industry and allied lines such as printing inks,

etc. Members of the Federation are chemists, chemical engineers, and supervisory production personnel of the industry. The Federation is composed of 25 local organizations, 22 of which are in the United States, 2 in Canada, and 1 in England.

The objectives of the Federation are as follows: (1) To develop or provide practical and technical facts, data, and standards fundamental to the manufacture and use of paints, varnishes, lacquers, related protective coatings, and printing inks; (2) to promote the investigation and interchange of ideas among its members and to promote research and application of the sciences in the manufacture and use of paints, varnishes, lacquers, related protective coatings, and printing inks; (3) to arrange for the collection and dissemination of information pertinent to the industries served by the Federation and for the presentation, discussion, and publication of papers and other contributions; (4) to encourage the establishment of constituent clubs and to coordinate their activities with those of the Federation; (5) to cooperate with the National Paint, Varnish, and Lacquer Association and other organizations in a manner consistent with the provisions of these bylaws; and (6) to perform a public service by the constant improvement of products and elimination of wasteful methods in manufacture.

FELT MANUFACTURERS COUNCIL, Daniel D. Gordon, Secretary,
c/o Northern Textile Association, 80 Federal Street, Boston, Massachusetts 02110

The Council's Technical Committee, representing over eighty percent of the pressed felt industry, is actively engaged in the establishment, review, revision, and promulgation of physical and chemical specification requirements for standard types of wool felt in both roll and sheet form.

In addition to counseling Federal agencies and engineering societies such as the American Society for Testing and Materials and Society of Automotive Engineers on their wool felt specifications, the Felt Council Technical Committee is a source for new technical information and papers covering additional wool felt performance characteristics which have not yet reached specification requirement status.

FLAT GLASS JOBBERS ASSOCIATION, William J. Birch, Executive Director, 6210 West 10th Street, Topeka, Kansas 66615

This Association has recently published a revised edition of their Glazing Manual. By virtue of its ever increasing popularity throughout the United States, the new Manual has gained recognition and is now being widely distributed in numerous foreign countries. Broadening design concepts, new construction methods and accelerated building material developments made the republication imperative.

The new Manual was prepared by the FGJA Glazing Manual Committee. Its purpose is to set forth in one volume the recommended basic procedures for glazing. The scope, however, has been enlarged to encompass plastic installation as well as the new

suspended glazing system. The format of the Manual has been improved, consolidating the information and making the technical data more readily accessible.

It is the aim of this Manual to be of particular use to the architect in specifying glazing methods, materials and procedures; to the contractor in supplying the recommended materials; and to the glazier in achieving quality performance.

**FLUID CONTROLS INSTITUTE, E. R. Rath, Executive Secretary,
P. O. Box 1485, Pompano Beach, Florida 33060**

This Institute is a nonprofit association of manufacturers of fluid control devices such as control valves, regulators, solenoid valves, safety and relief valves, traps, steam heating pumps, strainers and separators, and space heating specialties. FCI is engaged in formulating voluntary standards and practices with respect to terminology, design, function, capacity, efficiency, construction, materials, manufacture, and testing of fluid control devices through the Sections engaged in various fields of activity.

The Sections of the FCI engaged in standardization work related to their field of activity include: Control Valve Section which develops standards in the area of automatic, external power operated control valves for positioning service; Regulator Section which develops standards related to self-powered positioning regulators; Solenoid Valve Section; Safety and Relief Valve Section; Industrial Steam Trap Section; Steam Heating Pump Section; Strainer and Separator Section; and Steam Heating Specialties Section.

At present, the following voluntary industrial standards have been issued and are available upon request: FCI 55-1 Standard Classification and Terminology for Power Actuated Valves; FCI 58-1 Definitions of Regulator Capacities; FCI 58-2 Recommended Voluntary Standards for Measurement Procedure for Determining Control Valve Flow Capacity; FCI 61-1 Recommended Voluntary Standards for Procedure in Rating Flow and Pressure Characteristics for Solenoid Valves; FCI 62-1 Recommended Voluntary Standard Formulas for Sizing Control Valves; FCI 65-1 Guide to Material Selection for Industrial Regulators; FCI 65-2 Voluntary Standards for Determining Steam Trap Capacity Rating; and FCI 65-3 Recommended Voluntary Standards for Face to Face Dimensions of Control Valves.

**FOOD FACILITIES ENGINEERING SOCIETY, Arthur B. Olian,
Executive Secretary, 1517 North Second Street, Harrisburg, Pennsylvania 17108**

The purpose of this Society, founded in 1955, is to promote research and improve design of public food facilities, and to foster and further food facilities engineering as a recognized profession. The Society's Research and Standards Committee is presently engaged in developing a standard specification for food service equipment.

FFES is a participating member of United States of America Standards Institute Sectional Committee Z64 Mass Feeding Kitchen Utensils and Containers. Research into the need for, and specific areas of standardization are presently being conducted.

In addition, FFES has a committee whose chairman is a member of the Joint Committee on Food Equipment Standards of the National Sanitation Foundation. The committee has aided in developing and revising NSF standards and criteria. An NSF Installation Manual is presently being prepared, to which this committee is contributing its recommendations.

FORGING INDUSTRY ASSOCIATION, Robert W. Atkinson, Executive Secretary, 1121 Illuminating Building, Cleveland, Ohio 44113

This Association sponsors technical committees of forging industry executives and by this means prepares recommended schedules of standards and tolerances for forged components. The Association also functions as a cosponsor with the National Safety Council in the development of the USA Standard Safety Code for Forging and Hot Metal Stamping, published by the United States of America Standards Institute.

FRICION MATERIALS STANDARDS INSTITUTE, H. G. Duschek, Secretary, 370 Lexington Avenue, New York, N. Y. 10017

The Technical Committee of this Institute is responsible for the standardization and simplification of the products of this industry. This committee has cooperated with the National Bureau of Standards in the development of specifications for a brake-lining testing machine which the Bureau constructed for testing purposes. The committee also collaborated with the Federal Government in the formulation and revision of the Federal Specifications covering brake lining.

GALVANIZED WARE MANUFACTURERS COUNCIL, Thomas Associates, Inc., Commissioners, 2130 Keith Building, Cleveland, Ohio 44115

The standardization and simplification activities of this association are carried on by its Simplification and Standardization Committee. This committee has confined its work to simplification of sizes of standard grade galvanized ware and assistance in the development of Commercial Standard 161-59 covering standard grade, hot-dipped galvanized ware, and Commercial Standard 169-59 covering galvanized ware fabricated from pregalvanized steel sheets. These two Commercial Standards and Simplified Practice Recommendation R226-47 were promulgated and published by the Commodity Standards Division (now Product Standards Section) of the U. S. Department of Commerce.

GAS APPLIANCE MANUFACTURERS ASSOCIATION, Harold Massey, Managing Director, 60 East 42nd Street, New York, N. Y. 10017

This Association represents manufacturers of domestic, commercial, and industrial gas appliances, and their accessories, and also manufacturers of gas production, transmission, and distribution equipment. It works cooperatively with the American Gas Association in promulgating industry safety standards, functioning under the auspices of the United States of America Standards Institute Sectional Committees Z21 and Z83.

GEMOLOGICAL INSTITUTE OF AMERICA, Richart T. Liddicoat, Jr., Director, 11940 San Vincente Boulevard, Los Angeles, California 90049

As a school for the purpose of training jewelers, this Institute teaches diamond appraising and colored-stone evaluation, using standard grading systems developed for this purpose. Several of the systems employed are modifications of those long used in the jewelry industry, but the Institute's appraising system developed for diamonds is based on a grading system for diamond cutting, which was possibly the first ever developed. Prices are set against grading standards on each of the important gemstones. In addition, the Institute maintains gem-testing and research laboratories in Los Angeles and New York City, as well as a gemological library consisting of 1,000 volumes.

GRAVURE TECHNICAL ASSOCIATION, Warren R. Daum, Executive Vice President, 60 East 42nd Street, New York, N. Y. 10017

The constant pressure on the gravure printer for tighter production schedules and higher quality have brought about important standardization and control methods, devices and instruments. The Gravure Technical Association, with a membership widely representative of the industry, has taken the lead in developing not only standards, but also means of measuring and controlling various aspects of the process in order to maintain these standards.

The largest project to date has been the development and establishment of a standards program for publication printing. The positive standards program evolved from the necessity of furnishing to the printer national advertisements from various agencies, clients (advertisers), and suppliers or service houses, consisting of reproduction material which must be assembled at one central point and etched into a common set of cylinders. In order to balance out properly, these positives should be within a standard density range. The Positive Standards Committee, in agreement with the various printers and suppliers of positives, agreed to standardize on a continuous tone range of 1.65 to .35 for continuous tone positives and .30 to .05 for halftone. In order to help maintain this standard, sets of color bars were made representing the two end densities and a middle tone density, namely 1.65, .95, and .35. Bars are all checked and certified by the Gravure Research Institute and distributed through GTA.

Representatives of GTA's engraver-service houses, ink suppliers and printers have printed color guides, that is, bars of colors using the positive standard scales and densities. These color guides are used as a point of reference throughout the various steps of the reproduction process, and include overprints of the basic colors for the accumulation of data on secondary colors, density evaluation, etc.

Proofing inks for newspaper supplements and magazines are supplied to engravers under a GTA label which certifies that the same uniform proofing inks are being used by all involved. As an additional point of reference GTA publishes ink guides which are used by the retoucher, the ink supplier, and the printer.

Service houses include the positive control strips along the edge

of all advertising positives they produce and these provide precise controls of known quantities which guide them in processing these advertisements. These proofs then go to the printer and provide the necessary quality control tool in the etching of the final printing cylinder which may carry scores of four-color advertisements supplied from all over the country. The result is a much closer approach to absolutely uniform printing of the same copy in various publications.

GTA's Densitometry Committee, in cooperation with Eastman Kodak Company, recently completed the new Certified Step Wedge for Calibrating Densitometers. The precise gray scale provides an accurate standard for calibrating and checking densitometers used in photographic processing. Each step wedge is checked and certified to conform to the accuracy of United States of America Standards Institute specifications. A four-point recommendation for proper care of densitometers also has been distributed.

In the field of package printing, GTA is compiling a Packaging Guide covering inks, cylinder bases, doctor blades, impression rolls, plating, engraving, gravure printing of film, printing of foil, and copy preparation. Also in the area of packaging, GTA has developed a standard set of positives for the creation of a color chart. These positives may be obtained by individual package printing plants, and charts made and run on their own equipment on their own stock and with their own ink, and provide a color chart of the type of work and type of material which the individual converter is interested in producing.

Another in the series of GTA certified assists is the gravure microscope test plate. This aid consists of a copper plate section with a single etched cell which has a depth certified in microns. This furnishes a ready point of reference for calibration of the gravure microscope.

The ink abrasion tester was developed a few years ago, and what began as a specialized tool has now become an internationally accepted instrument. It has found wide use not only in abrasion testing of inks, but also for coatings.

The cylinder gauge, developed over seven years ago through the work of GTA committees, provides a practical tool for measuring the diameter of a gravure cylinder within a tolerance of plus or minus .002 in. The large micrometer-type instrument permits the "miking" of a cylinder completely to determine taper, end-to-end variance, out-of-roundness, and conformance to plant standards. A master wheel-like ring is provided with the gauge for calibrating it.

GRAY AND DUCTILE IRON FOUNDERS' SOCIETY, Donald H. Workman, Executive Vice President; Charles F. Walton, Technical Director, 930 National City-East 6th Building, Cleveland, Ohio 44114

The Society is a trade association in the foundry industry representing producers of gray iron, ductile iron, and white iron castings in the United States and Canada. The Society itself does not establish standards, but provides active support and data to the standards organizations. Main participation is with the American Society for Testing and Materials. The GDIFS promulgates a

summary of established specifications on the industry's products, an approved terms and conditions of sale, and a foundry cost accounting system. The Society's "Gray Iron Castings Handbook," published in 1958, is a complete (620 pages) reference on the subject of gray, ductile, white and alloy iron castings.

**GRINDING WHEEL INSTITUTE, Thomas Associates, Inc.,
Managers, 2130 Keith Building, Cleveland, Ohio 44115**

The standardization and simplification activities of this Institute are carried on by two committees, Standards Committee and Safety Committee. The work of the Standards Committee deals primarily with simplification matters. It initiated the program for simplification of sizes of grinding wheels and these efforts resulted in the establishment of Simplified Practice Recommendation R45-57 which was published by the Commodity Standards Division (now Product Standards Section), U. S. Department of Commerce. This Standards Committee's activities also include assistance in the development of USA Standards covering the products of the industry. As they are finalized, they are submitted to the United States of America Standards Institute for approval.

This Institute was joint sponsor with the International Association of Governmental Labor Officials in the development of the USA Standard Safety Code for the Use, Care, and Protection of Abrasive Wheels, which was approved and issued as USA Standard B7.1-1964. The Institute is also represented on three USASI committees—Small Tools and Machine Tool Elements, Safety Code for Exhaust Systems, and the Mechanical Standards Board of the United States of America Standards Institute.

**GUMMED INDUSTRIES ASSOCIATION, William V. Driscoll,
Manager, 415 Lexington Avenue, New York, N. Y. 10017**

This Association cooperated with the Commodity Standards Division (now Product Standards Section), National Bureau of Standards in the establishment of Simplified Practice Recommendation R114-63 Gummed Kraft Paper Sealing Tape, covering standard weights, sizes and strength of sealing tape. It also publishes standard test procedures for various gummed products.

**GYPSUM ASSOCIATION, Lloyd H. Yeager, Executive Vice President,
201 North Wells Street, Room 2510, Chicago, Illinois 60606**

The Gypsum Association's main interest in standardization is concerned with the development of material and application standards suitable for use within the construction industry. Most of this work is done in cooperation with the American Society for Testing and Materials and the United States of America Standards Institute.

The Gypsum Association is a member of the American Society for Testing and Materials and serves as Secretary to Committee C-11 on Gypsum. It is also active on Committee E-5 on Fire Test of Materials and Construction, Committee E-6 on Methods of Testing Building Constructions, and Committee C-20 on Acoustical Materials.

As a member of the United States of America Standards Institute, the Gypsum Association is a cosponsor of USA Standard A97.1 for Gypsum Wallboard and the Standard A59.1 for Gypsum Concrete. In addition, it is a member of USASI Sectional Committee A42.1 and A42.4 on Gypsum Plastering and Interior Lathing and Furring.

GYPSUM ROOF DECK FOUNDATION, Edward H. Martin,
Executive Secretary, 1201 Waukegan Road, Glenview, Illinois 60025

This is a national trade association consisting of building contractors active in the promotion, sales and installation of poured-in-place gypsum roof decks. Members also include suppliers to the industry. The association has developed and published the following: Standard Installation Practices for the Gypsum Roof Deck Industry; Design Data, Poured Gypsum Roof Deck; and How to Inspect a Gypsum Roof Deck. The Association also publishes and was concerned with the development of United States of America Standards Institute A59 Specifications for Reinforced Gypsum Concrete; American Society for Testing and Materials Specifications C472, C473, C317, and C318; and the Gypsum Association "Blue Sheet" on Testing Samples of Gypsum Concrete.

HACK AND BAND SAW MANUFACTURERS ASSOCIATION OF AMERICA, 1718 Sherman Avenue, Evanston, Illinois 60201

This Association has had standardization as the main objective since its founding in the 1920's as the Hack Saw Association. At that time, the Association's main purpose was to standardize the many thousands of sizes of hack saw blades then on the market. With the advent of band saws, the Association's name was changed and its scope enlarged to include the standardization of band saws.

The Association keeps a close watch on the changes needed in the Simplified Practice Recommendations and cooperates with the National Bureau of Standards in rewriting them as necessary. A band saw standard was recently revised to include the new high speed and intermediate steels as well as new applications.

Changes needed in existing standards are detected by means of popularity indices and nonstandards reports—the first issued annually and the second quarterly. New blades and new applications make this continual "Watch-Dogging" imperative, for thus the manufacturers remain flexible enough to fit their customer's needs, and by standardization the number of "Specials" needed cuts costs for everyone involved.

HARDWOOD DIMENSION MANUFACTURERS ASSOCIATION,
J. Edgar Kennedy, Managing Director, Wilson-Bates Building, 3813 Hillsboro Road, Nashville, Tennessee 37215

Committees of this Association cooperate with all lumber manufacturing associations for both hardwood and softwood, and furniture manufacturing and other wood using industries in bringing about standardization programs on grading rules for hardwood dimension parts. In this connection the Association, in March

1961, produced and published Fifth Editions of "Rules for Measurement and Inspection of Hardwood Dimension Parts," "Rules for Measurement and Inspection of Hardwood Interior Trim and Moldings," and "Rules for Measurement and Inspection of Hardwood Stair Treads and Risers." In order to assure purchasers that the various types of products covered by these grading rules and standards are in accordance with the quality and grade covered by the standards, the producers of this industry may either individually, or in cooperation with the Association, issue guarantee certificates of classification (HDMA Certificate of Origin) for specific shipments, or grade and trademark, or each piece or bundle as conforming to the HDMA Grading Rules.

HARDWOOD PLYWOOD MANUFACTURERS ASSOCIATION,
Clark E. McDonald, Managing Director, P. O. Box 6246, Arlington,
Virginia 22206

Standardization is an important part of the activities of the Association. HPMA is the national trade association of hardwood plywood manufacturers with an office and laboratory building in Arlington, Virginia.

HPMA initiated the recommended revisions to Commercial Standard 35-61 Hardwood Plywood, and CS233-63 Laminated Hardwood Block Flooring. It also established grade stamps for its members' use to certify that their plywood or flooring meets the requirements of these standards.

The Association cooperates with the development of other Commercial Standards, Federal and Military Specifications which affect hardwood plywood or laminated hardwood block flooring.

HEARING AID INDUSTRY CONFERENCE, c/o S. F. Lybarger,
Vice President, Radioear Corporation, Radioear Building, Valley
Brook Road, Canonsburg, Pennsylvania 15317

The Conference is active in hearing aid standardization through representation on United States of America Standards Institute Sectional Committee S-3. It has issued one standard entitled "HAIC Standard Method of Expressing Hearing-Aid Performance" (1961) but is primarily concerned with supporting and participating in the drafting of American and International Standards relating to hearing aids and audiometers.

A standards committee is active in the dissemination of standards information to HAIC members and in coordinating HAIC activities with other standards groups. The Conference has been in existence since 1955 and its membership includes some thirty hearing aid, hearing aid battery, hearing aid component and audiometer manufacturers doing business in the United States.

HOME VENTILATING INSTITUTE, Arthur J. Tuscany, Jr.,
Executive Director, 1108 Standard Building, Cleveland, Ohio 45213

This Institute conducts a program to establish performance standards and to certify product ratings of member companies manufacturing ceiling, wall, oven, and range hood fans used in

kitchen, bath, family, laundry, and recreation rooms. Products certified by H.V.I. have been tested in a recognized engineering laboratory at Texas A & M University using equipment under conditions approved by air movement engineering organizations. All products tested and certified under this program are identified by labels indicating H.V.I. performance ratings. The labelling of products is recognized by the Federal Housing Administration as the standard of certified performance (FHA Minimum Property Standards, Paragraph 1002-2.2).

The Home Ventilating Institute supports a public relations and educational program and publishes books and pamphlets on the subject of better ventilation for the home-building industry. Membership is open to all qualified manufacturers in the home ventilation industry.

ILLUMINATING ENGINEERING SOCIETY, A. D. Hinckley, Managing Director; C. L. Crouch, Technical Director; United Engineering Center, 345 East 47th Street, New York, N. Y. 10017

Standardization work of this Society is carried on by over 80 technical committees and subcommittees which study and report to the Governing Council on lighting of all areas such as: airports and aircraft, farms, industrial plants, institutions, offices, public conveyances, residences, schools, service stations and parking areas, sports and recreational areas, stores, streets and highways, theaters and television studios. The Society's committees are also concerned with light sources, lighting and air-conditioning, lighting education programs, lighting progress, lighting maintenance, light control and equipment design, nomenclature, quality and quantity of light, searchlighting and testing procedures for illumination characteristics. Standards, specifications, and reports on the above subjects are published in the monthly journal, "Illuminating Engineering." Many of these reports become USA Standards after processing through the channels of the United States of America Standards Institute.

Through an active research program the Society is able to feed to the technical committees data which is used in developing reports and standards.

The Society is also active in related matters through representation on committees of other professional organizations, some of which are the International Commission on Illumination, National Research Council, Intersociety Color Council, National Office Management Association, Society of Motion Pictures and Television Engineers, American Association for the Advancement of Science, United States of America Standards Institute, National Committee on Uniform Traffic Laws and Ordinances, and U. S. Institute for Theatre Technology.

INCINERATOR INSTITUTE OF AMERICA, Donald V. Reed, Secretary-Treasurer, 630 Third Avenue, New York, N. Y. 10017

This is a national trade association whose members are individuals, firms, and corporations engaged in the design and manufacture and/or construction of incinerators.

The Incinerator Institute of America has issued Incinerator Standards based on research, and recommends that they be taken as a basis for the development of codes in the many municipalities of the United States.

INDIANA LIMESTONE INSTITUTE OF AMERICA, D. R. Bliss,
Executive Director, 431 South College Avenue, Bloomington, Indiana 47401

This Institute, established in 1876, has for its purpose the following: To coordinate the interests of the Indiana Limestone industry throughout the United States and Canada; to promote the product impartially and to advertise truthfully; to conduct product and application research; to compile and distribute literature, films, and technical information; and to establish and maintain standards of grading, finishes and fabrication.

The Institute represents thirty-five companies that quarry and fabricate Indiana Limestone. Working in conjunction with various groups of the United States of America Standards Institute and American Society for Testing and Materials, it has prepared, established, and published standard specifications covering: Grades, finish, physical properties, erection, setting, cleaning, and water-proofing of Indiana Limestone; and a Handbook on Indiana Limestone.

INDUSTRIAL DIAMOND ASSOCIATION OF AMERICA, Margaret J. McGinnis, Executive Manager, 25 West 43rd Street, Room 1518, New York, N. Y. 10036

This Association is closely involved with standards for industrial diamonds. With the American Society of Tool and Manufacturing Engineers, it cosponsors United States of America Standards Institute Project B-67, Industrial Diamonds and Accessories for Their Use. Through this project, a USA Standard for Diamond Dressing Tools has been developed, approved, and made available. Through cosponsorship with the Grinding Wheel Institute, the Association also cosponsors USASI Project B-74.1, Identification Code for Diamond Wheel Shapes (currently under revision). Other standardization projects are being studied by the various committees with a view to presenting them to the United States of America Standards Institute for approval.

In cooperation with the National Bureau of Standards, the Association developed a separate Commercial Standard for grading of diamond powder, approved September 1963 and known as CS261-63, Grading of Diamond Powder in Sub-Sieve Sizes. It is currently cooperating with NBS in revising the other half of the old CS123-49, Grading of Diamond Powder in Sieve Sizes.

INDUSTRIAL FASTENERS INSTITUTE, Frank Masterson,
President, 1517 Terminal Tower, Cleveland, Ohio 44113

The Institute is a trade association representing manufacturers of industrial fasteners in the United States. Through its working committees, sections, and technical staff, it is heavily involved in

standardization and simplification activities. In carrying forward this work, the Institute develops fastener standards and actively cooperates with national standard groups, Government agencies, and other technically oriented associations.

Through its Committee on Standards and Technical Practices, the Institute has published "Bolt, Nut, and Rivet Standards" in which are assembled the current adopted standard practices of the fastener industry. Other publications of Institute standards and recommendations are: "Hexagon Locknuts-Torque Type, Steel," "Recommended Practices for Acceptable Quality Level for Bolts, Nuts, and Similar Fasteners," "Locking Screw Specifications," "Twelve Point and Flanged Fasteners," and a "Manual on Packaging and Bulk Packing of Bolts, Screws, and Nuts."

The Institute's Publications and Information Committee publishes a quarterly magazine, "Fasteners," which contains many articles relating to standards. Special issues are devoted to coverage of specific subjects such as a complete listing of Identification Markings for Fasteners.

The Institute is officially represented on five Sectional Committees of the United States of America Standards Institute, and on nine subcommittees under B1 and B18. The Technical Director of the Institute is an official delegate to the International Organization for Standardization (ISO) and attends all meetings relating to fasteners. Staff members also serve on standards committees for the American Society for Testing and Materials, and the Society of Automotive Engineers. The Technical Director is also a member of the Federal Government's Interdepartmental Screw Thread Committee.

INDUSTRIAL MANAGEMENT SOCIETY, John W. Linsley,
President, 330 South Wells Street, Chicago, Illinois 60606

Through the Occupational-Rating Research Group, this Society developed an occupational-rating plan for hourly and salaried occupations, which is a standard devised by the Society for standardizing and evaluating occupations. This standard is being widely used at the present time throughout the country. The use and adoption of the plan as set forth in this standard serve to establish more uniform classifications of grading occupations among various manufacturers concerned. The Society also maintains a rental library of industrial engineering training and work simplification films. These films depict "before" and "after" phases of methods improvements made on actual jobs in some of America's leading companies. All films are award winners from an annual competition sponsored by the Society.

INDUSTRIAL MEDICAL ASSOCIATION, Clark D. Bridges, Man-
aging Director, 55 East Washington Street, Chicago, Illinois 60602

The Association was organized originally as the American Association of Industrial Physicians and Surgeons. There are 3,600 member physicians affiliated.

The objectives of the Association are to foster the study and discussion of the problems peculiar to industrial medicine and

surgery; to develop methods adapted to the conservation of health among workers in the industries; to promote a more general understanding of the purposes of the medical care for employees; and to unite into one organization members of the medical profession specializing in industrial medicine and surgery for their mutual advancement in the practice of their profession.

Its Committee on Standards has established minimum standards to be used in evaluating and accrediting medical service programs in industry. These standards embrace the scope, purpose, and functions of occupational health programs and include such factors as: Medical policy of the company, the professional staff, pre-employment examinations for proper job placement, periodic examinations for health maintenance, provisions for adequate care of injury and illness, adequacy of medical facilities, control of health hazards, and suitable records properly used. The accreditation function, using these standards, is performed by the Occupational Health Institute, Inc., an educational affiliate of the Association.

INDUSTRIAL SAFETY EQUIPMENT ASSOCIATION, D. V. Reed,
Secretary-Treasurer, 630 Third Avenue, New York, N. Y. 10017

All of the work of this Association in the field of standardization is carried on in cooperation with the United States of America Standards Institute and Federal agencies. It is officially represented on numerous USASI sectional committees dealing with safety codes for protection of head, eyes, respiratory organs, hearing, hands and body, and hazards from woodworking, metalworking and welding operations and machinery. In addition, the Association is sponsor of the USASI Sectional Committee L18 for Protective Occupational Clothing. Continuous cooperative research is maintained in the area of improved testing methods for personal protective equipment standards.

INDUSTRIAL TRUCK ASSOCIATION, L. West Shea, Executive
Secretary-Treasurer, Gateway Towers, Gateway Center, Pittsburgh,
Pennsylvania 15222

This Association, through its Engineering Committee, is developing a Manual of Recommended Practices in order to advance safety and efficiency in the design, manufacture, and use of industrial trucks.

The Association also cooperates with the United States of America Standards Institute in working with the Sectional Committee for Industrial Power Trucks, which is sponsored by the American Society of Mechanical Engineers. This committee is engaged in developing a uniform safety code for industrial power trucks.

INDUSTRY SERVICE BUREAU, George P. Byrne, Jr., Secretary,
331 Madison Avenue, New York, N. Y. 10017

AIRCRAFT LOCKNUT MANUFACTURERS ASSOCIATION

This organization works closely with the military and civilian branches of the Government in the development of aircraft locknut specifications, standards, and methods of cataloging. The Associa-

tion also cooperates with the United States of America Standards Institute and the American Society of Mechanical Engineers.

ELECTRIC FUSE MANUFACTURERS GUILD

This organization develops and submits to the appropriate Government offices suggestions for the improvement of Military and Federal Specifications and Standards covering electric fuses. It also cooperates with the National Bureau of Standards in matters relating to the performance and specifications of different types of electric fuses. In addition, the Guild cooperates with the Underwriters' Laboratories concerning labels and materials from which electric fuses are made.

SERVICE TOOLS INSTITUTE

The Institute represents the manufacturers of mechanics' hand service tools and works closely with the General Services Administration and other Government departments in matters relating to hand service tools specifications, standards, and cataloging. It also cooperates with the United States of America Standards Institute and the American Society of Mechanical Engineers in the development of standards for hand service tools.

SOCKET SCREW PRODUCTS BUREAU

The bureau works closely with the civilian and military branches of the Government in matters relating to socket screw and set screw cataloging, specifications, and standards. It also cooperates with the Society of Automotive Engineers and the United States of America Standards Institute in the development of socket and set screw standards.

TAPPING SCREW SERVICE BUREAU

Through its Standards Committee, this organization cooperates with the Society of Automotive Engineers and the United States of America Standards Institute in the development of suggested dimensional and size standards for tapping screws. The Bureau also cooperates with the military and civilian branches of the Government in the development of tapping screw specifications and standards.

UNITED STATES CAP SCREW SERVICE BUREAU

This Bureau cooperates with the U. S. Customs Service in matters relating to the proper nomenclature and classification of industry products for customs purposes. It also cooperates with other Government agencies in the improvement of Military and Federal Specifications and Standards for cap screws. Suggested improvements in cap screw standards also are developed by the Bureau's Standards Committee, which works in close cooperation with the United States of America Standards Institute and the Society of Automotive Engineers.

UNITED STATES MACHINE SCREW SERVICE BUREAU

The Standards Committee of this organization considers the dimensional standards of the products of the industry and cooperates with the United States of America Standards Institute and the Society of Automotive Engineers in the development of proposed additions to and changes in existing standards in industry products. The Standards Committee also cooperates with Government agencies in matters relating to Military and Federal Specifications and Standards.

UNITED STATES WOOD SCREW SERVICE BUREAU

The Standards Committee of this organization develops proposed standards, dimensions and sizes of wood screws. It works in close cooperation with the United States of America Standards Institute and the Society of Automotive Engineers. The Standardization Committee also cooperates with Government agencies in matters pertaining to Military and Federal Specifications and Standards for wood screws.

INSTITUTE OF APPLIANCE MANUFACTURERS, Samuel Dunckel, Managing Director, 2000 K Street, N.W., Suite 455, Washington, D. C. 20006

This Institute has carried on standardization activities in the fields of oil heating and, to a lesser extent, in color coordination.

The Technical Committee of the Oil Division of the Institute developed standards for flue-connected oil-burning space heaters covering oil heater rating tests, methods for publication of ratings, and a zone chart for selecting the proper size of heater for a given space in the various geographical areas of the country. This work has been coordinated by the National Bureau of Standards and a Commercial Standard published. The Institute has assisted in other Commercial Standards having to do with oil furnaces and oil floor furnaces. All three of the standards, formerly known as CS101-43, CS104-49 and CS113-51, are currently in the process of revision.

Work done in the standardization of colors took the form of preparation of color cards. Up to this date, color standardization in the appliance industry has not been highly successful but efforts are continuing to standardize both color tones and color descriptions.

INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS, Louis F. Kurtz, General Manager, 393 Seventh Avenue, New York, N. Y. 10001

The Institute issues Codes for Testing and Rating Cast-Iron and Steel Boilers, Commercial Finned Tube Radiation, Baseboard Radiation and Indirect Water Heaters. The Ratings developed under these codes are generally accepted by government departments and the heating industry throughout the world.

The Institute maintains close contact with other organizations

such as the American Society of Mechanical Engineers, American Society of Heating, Refrigerating and Air Conditioning Engineers, Mechanical Contractors Association, National Association of Plumbing-Heating-Cooling Contractors, American Gas Association, Electrical Heat Association and the Oil Heat Institute of America.

Other activities of the Institute include continuation of a research program in cooperation with the University of Illinois to determine facts with respect to hydronic heating installation and, more recently, in connection with compatible cooling systems. The Institute publishes Calculation and Installation Guides for use by the heating and cooling industry, and conducts IBR Heating and Cooling Schools designed to promote efficient and economical installations.

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, D. G. Fink, General Manager, 345 East 47th Street, New York, N. Y. 10017

This Institute was formed in January 1963, by the merger of the American Institute of Electrical Engineers (AIEE) and the Institute of Radio Engineers (IRE).

The standardization activities of the IEEE are carried on by its many Groups and Technical Committees for approval by the Standards Committee. The standards presently comprise 266 sections covering various kinds of electric and electronic equipment. They are chiefly devoted to abbreviations, symbols, defining of terms, conditions, and limits which characterize behavior, and methods of measurement with special reference to acceptance tests. Many of them are recognized officially as USA Standards by the United States of America Standards Institute.

The Institute is a Member Body of the United States of America Standards Institute and is represented on its Board of Directors, Standards Council, Acoustical Standards Board, Electrical Standards Board, Graphic Standards Board, Information Processing Systems Standards Board, Mining Standards Board, and Nuclear Standards Board.

The IEEE serves as sponsor or cosponsor for the following 21 USASI Sectional Committees: C5 on Code for Protection Against Lightning; C16 on Radio and Electronic Equipment; C19 on Industrial Control Apparatus; C34 on Static Power Converting Equipment; C35 on Rotating Electric Machinery on Railway Locomotives and Rail Cars and Trolley, Gasoline-Electric and Oil-Electric Coaches; C40 on Storage Batteries; C42 on Definitions of Electrical Terms; C55 on Capacitors; C62 on Lightning Arresters; C68 on Sphere Gaps; C76 on Apparatus Bushings; C92 on Insulation Coordination; C93 on Coupling Capacitors, Coupling Capacitor Potential Devices, and Line Traps; C95 on Radio-Frequency Radiation Hazards; C97 on Low-Voltage Fuses; M24 on Safety Rules for Installing and Using Electric Equipment in Metal Mines; N3 on Nuclear Instrumentation; N4 on Electric Apparatus and Systems in the Nuclear Field; S4 on Sound Recording; Y32 on Graphic Symbols and Designations; and Z17 on Preferred Numbers.

In addition, the IEEE has representation on 64 other USASI Sectional Committees dealing with all phases of electrical and electronics engineering.

INSTITUTE OF ENVIRONMENTAL SCIENCES, Henry F. Sander, Executive Secretary, 940 East Northwest Highway, Mt. Prospect, Illinois 60057

This Institute, founded in 1957, is devoted to the development and promotion of standards, specifications, research, simulation techniques, testing techniques, and the development of design criteria for equipment operation.

The Institute's Standards Committee considers and investigates all matters relating to units and standards pertaining to, or applicable in, environmental engineering, coordinates the work of the technical committees with respect to the making and reviewing of standards, and represents the Institute in its work with other standardization bodies in matters relating to standards and units. The committee also appoints representatives to serve on standardizing committees sponsored by the Institute, and on delegations for standardizing purposes which work under the sponsorship of other societies and technical organizations. As a representative of the Institute, the Standards Committee gives final approval to standards in the organization's name, reports all new and revised standards, and seeks the guidance and approval of its department upon all policy questions, including that of undertaking the preparation of standards in new fields.

The Institute of Environmental Sciences has members on several United States of America Standards Institute committees such as S2 Mechanical Shock and Vibration, and is sponsor of the Z84 committee which is responsible for compiling a glossary of environmental terms. In addition, the Institute cooperates with many other national technical organizations in matters regarding environmental standards, testing and engineering. Members have joined in cosponsoring meetings or group efforts with such organizations as the American Society for Testing and Materials, American Institute of Aeronautics and Astronautics, American Society for Quality Control, Institute of Electrical and Electronics Engineers, Department of Defense Shock and Vibration Information Center, and the Army Materiel Command. Globally, the Institute sponsors a representative to the International Electrotechnical Commission concerned with international standardization of environmental test methods.

INSTITUTE OF HIGH FIDELITY, Gertrude Nelson, Executive Secretary, 516 Fifth Avenue, New York, N. Y. 10036

This Institute is an industry organization whose Standards Group formulates methods of measurement applicable to home electronic entertainment devices such as amplifiers, FM and AM tuners, etc. The intent of the standards has been to set up methods of measurement to include all the allowances that should be made for the peculiarities of different units. Implicit in this approach is freedom from a restrictive philosophy and preservation of a forward looking attitude of a progressive industry.

The IHF Standard Methods of Measurement for Audio Amplifiers was published first in 1958 as Number IHFM A-200 and revised to IHF A-201 in 1966. It covers measurement methods of amplifiers, both small signal and power, for transient and steady state, and the method of publishing these results. Block diagrams and tutorial material are included to make the methods explicit and complete. The standard pertains to single and multi-channel amplifiers.

The IHFM Standard for Methods of Measurement for Tuners was published in 1958. It covers AM and FM tuner measurements beginning with definition of terms, operating conditions, requirements and characteristics of testing apparatus, and test procedures. The committee is currently working on updating and broadening this standard to cover multiplex measurements.

Upon completion of the tuner standard, the committee plans to develop methods of measurements for tape equipment, loudspeakers, and phonograph pickups.

INSTITUTE OF PRINTED CIRCUITS, R. E. Pritchard, Executive Secretary, 3525 West Peterson Road, Chicago, Illinois 60645

Members of this trade association include producers and users of printed circuit boards. There is also a special provision for membership for qualified technical representatives from government agencies.

The IPC has published recommended dimensional tolerances for commercial and military applications. In addition, a standard for acceptability of printed circuit boards has been published, and standards for flexible flat cables and flexible circuitry are being developed.

Design and performance specifications for multilayered printed wiring boards are available from this association.

INSTITUTE OF SCRAP IRON AND STEEL, William S. Story, Executive Vice President, 1729 H Street, N.W., Washington, D. C. 20006

For many years, this Institute has endeavored to establish with the cooperation of government and interested parties, specifications for the iron and steel scrap grades prepared by its member companies and others in the industry to meet the needs of consumers. These specifications had their origin in trade practices and consumer requirements dating back to the nation's first use of scrap in the steel and foundry industries.

Formal codification of these specifications came in 1926 under the direction of U. S. Department of Commerce Simplified Practice Recommendation R58-26. Revisions have occurred in 1928, 1936, 1953, 1959, and 1961. The specifications cover basic open hearth and blast furnace, electric furnace and foundry, cast iron and special grades of iron and steel scrap, and give recognized classifications for each grade. Off-grade material and scrap containing residual material are defined and the degree of cleanliness described. Provisions are made for deviations from the designated classifications.

The current specifications for Iron and Steel Scrap, promulgated

by the Institute's Subcommittee on Specifications, were adopted by the Board of Directors, who, in July 1961, directed that they be printed as official standards of the Institute.

INSTITUTE OF TRAFFIC ENGINEERS, Stephen G. Petersen, Executive Secretary, 1725 DeSales Street, N.W., Washington, D. C. 20036

The Institute's principal contribution to the development of standards is through cooperative efforts with other groups such as the National Joint Committee on Uniform Traffic Control Devices, which prepared the Manual on Uniform Traffic Control Devices.

In addition to cooperative endeavors toward standards in the field of highway transportation and traffic safety, this Institute has developed and published a number of technical reports which have been approved as USA Standards by the United States of America Standards Institute. These reports cover such subjects as Adjustable Face Traffic Control Head Standards; Pre-Timed, Fixed Cycle, Traffic Signal Controllers; Traffic-Actuated Traffic Signal Controllers and Detectors; A Model Performance Specification for Purchase of Pavement Marking Paint; and Adjustable Face Pedestrian Signal Head Standard.

INSTITUTIONAL RESEARCH COUNCIL, J. S. Fassett, Executive Vice President, 221 West 57th Street, New York, N. Y. 10019

The activities of this organization in the field of standards are designed to benefit the institutional consumers represented by its membership of associations serving hotels, motels, hospitals, libraries, schools, colleges, YMCA's, etc.

This Council was organized in 1961 as a nonprofit membership association of institutional consumers of supplies and materials with the purpose of aiding institutional consumers in making informed and satisfactory buying decisions. Unique in concept and objectives, the IRC conducts scientific laboratory tests of a wide variety of products, serves as a clearinghouse for dissemination of research findings of member groups, and sponsors research projects of mutual interest to members. The Council is currently sponsoring research by itself or in cooperation with various other organizations which will lead to the development of performance standards for wall coverings, carpet underlays, and mattresses.

The Council's 1965-66 Workbook of Test Methods and Standards covers eighteen cleaning and maintenance products and standards for 100% wool, 100% acrylic, and 100% nylon carpets.

IRC's Certified Products Program puts these standards to use and also employs the L24 Standards of the United States of America Standards Institute for an annual listing of brand name items grouped by use, which have been tested for compliance with these standards. Each year more than 50,000 copies of the Certified Products List are made available to member organizations, manufacturers and to the general public.

INSTRUMENT SOCIETY OF AMERICA, Herbert S. Kindler, Director, 530 William Penn Place, Pittsburgh, Pennsylvania 15219

This Society is a nonprofit, technical, scientific, and educational organization of individuals interested in the theory, design, manu-

facture, and use of instruments. Areas of technical activity include measurement, data acquisition, processing, display, telemetry, and automatic control in both industrial and laboratory applications. Publications of information reports, recommended practices, and standards have been an integral part of Society operations since the organization was formed in 1946. Technical progress in instrumentation is also presented at annual conferences and symposia and through ISA periodicals, proceedings, and miscellaneous publications.

ISA maintains standards and practices committees in the broad areas of measurement devices, control devices, symbology, and safety. Examples of the work of these committees in each area include documents on: thermocouples, flowmeters, transducers, rotameters; face-to-face dimensions, manifold designs, pneumatic circuits, annunciators, dynamic response testing; instrumentation flow sheets and specification forms, panel tubing; mercury handling, instrument purging, and intrinsically safe circuits. Through 1965, ISA has published 40 recommended publications and standards. The Society also contributes to the United States of America Standards Institute committees for orifice flanges, pressure gages, instrument calibration, metrology, electrical measuring and reference instruments, automatic control terminology, nuclear instruments, and computer components.

INSULATED POWER CABLE ENGINEERS ASSOCIATION, G. M.

Haskell, Secretary, 283 Valley Road, Montclair, New Jersey 07042

The membership of the Association consists of engineers from the technical staffs of the leading American and Canadian manufacturers of wire and cable used for the transmission and distribution of electrical energy.

Many of its members are also members of other technical organizations, such as the Institute of Electrical and Electronics Engineers and the American Society for Testing and Materials. The Association is itself a member of the United States of America Standards Institute.

The activities of this Association are concerned with matters relating to bare, covered, and insulated conductors including preparation of engineering recommendations and standards, and consultation and collaboration with other technical organizations and agencies in the preparation and publication of engineering standards and specifications for bare and insulated wire and cable. Copies of these publications may be obtained from the Secretary.

INSULATION BOARD INSTITUTE, Charles M. Gray, Manager,

Robert A. LaCosse, Technical Director, 111 West Washington Street, Chicago, Illinois 60602

A group of manufacturers of structural insulating board initiated a program for the establishment of Commercial Standard CS42-35 covering specifications for two classes of insulating board designated as "insulating building board" and "roof insulating board." This standard was published by the National Bureau of Standards and adopted by this Institute. The current issue of this standard is CS42-49, covering specifications for six classes of

"structural fiber insulating board." A committee of the Institute is now preparing a new issue of this standard. In December 1963, the U. S. Department of Commerce released the latest issue, initiated by this Institute, of Simplified Practice Recommendation R179-63 on Structural Insulating Board. This SPR was first issued in 1942 with interim revisions in 1946 and 1956 to keep in line with trade practices.

The Institute cooperated in the development and revision of the Federal Specification for fiberboard, the current issue of which is designated "LLL-I-535, Insulation Board, Thermal and Insulation Block, Thermal." The Institute also cooperated with the American Society for Testing and Materials in developing specifications and test methods for "Structural Insulating Board Made from Vegetable Fibers." In addition, it is officially represented on various committees of the United States of America Standards Institute concerned with standards relating to insulating board or its uses.

Research Programs of the Institute involve development of new uses for insulation board products, development of application specifications, study of the effect of moisture conditions in the design of buildings using insulation board products, and development of fire test and building code data.

The Institute publishes "Fundamentals of Building Insulation," which is periodically revised to keep it up-to-date with progress in the use of insulation. It also issues recommended product and application specifications, technical bulletins and other general literature regarding the use and application of insulation board products.

INTERNAL COMBUSTION ENGINE INSTITUTE, Charles G. Spice, Executive Secretary, Room 1516, 201 North Wells Street, Chicago, Illinois 60606

This organization is composed of manufacturers of high-speed (750 rpm and up) internal combustion engines, both gasoline and diesel, air or liquid cooled, which are sold for automotive, agricultural, industrial, marine, oil field, and other heavy duty applications. Regular meetings are usually held in February, April, June, October, and December, and are attended by the policymaking executives of member companies. In addition, the following standing committees meet to discuss problems peculiar to the activities of each; viz., Engineering and Technical, Service and Parts, Foreign Trade, Industrial Relations, Lubricating Oil, Purchasing, Marine Inspection, etc. Such committees meet as required based on specific problems in which they are individually interested. The Institute adopted standards covering gasoline engine testing and rating procedure, basic warranties, etc.

As occasion demands, the Institute cooperates with the Petroleum industry and similar groups or associations. It has issued a booklet, "Lubricating Oils for Industrial and Heavy Duty Automotive Engines," in which are listed the oil company brand names which are guaranteed to meet the following specifications: MIL-L-2104A, Supplement 1 (S-1), MIL-L-2104B and Series 3 (Caterpillar) MIL-L-45199A; such a publication was considered

to be a service to the oil companies, the engine companies, and the customers of both who use such products.

INTERNATIONAL ASSOCIATION OF ELECTRICAL INSPECTORS, L. E. LaFehr, Managing Director, 201 East Erie Street, Chicago, Illinois 60611

This Association, consisting of State, Federal, industrial, utility, and insurance electrical inspectors, is one of the major contributors to preparation of the National Electrical Code. It is also one of the major users of the Code, which is published by the National Fire Protection Association and has achieved United States of America Standards Institute status. The Code is the principal tool of the electrical inspector in his work in the field. The Association has representatives on all of the National Electrical Code-Making Panels, and the Association's experience in the field thus finds a voice in the Code-making processes.

IAEI is also a major participant in the preparation of other NFPA Standards such as No. 75, Electronic Computer Systems; No. 76, Essential Hospital Electrical Service; and No. 79, Metal Working Machine Tools.

INTERNATIONAL ASSOCIATION OF ELECTROTYPERS AND STEREOTYPERS, Floyd C. Larson, Secretary-Treasurer, 758 Leader Building, Cleveland, Ohio 44114

Through its Standardization Committee, this organization has prepared standards for printing plates. These standards cover thicknesses and tolerances for unmounted and curved electrotypes, bevel of edges of patent base plates, thickness of shell, and standard formula for electrotype backing metal. This Association has prepared and issued "The Electrotype and Stereotype Handbook" and "Basic Requirements for Electrotypes."

Current standardization efforts are in stereotyping operations and materials, and in rubber and plastic platemaking.

Standardization work is now under direction of the Research and Development Committee.

INTERNATIONAL ASSOCIATION OF GARMENT MANUFACTURERS, Jules Goldstein, Executive Director, 347 Fifth Avenue, New York, N. Y. 10016

This Association assisted in the establishment of Commercial Standards relating to Boys' Blouses, Shirts, Waists, Pants, and Boys' Outerwear. It has also cooperated in the preparation of Federal Specifications relative to measurement for Men's Outerwear, Work Shirts, and Dungarees.

INTERNATIONAL ASSOCIATION OF GOVERNMENTAL LABOR OFFICIALS, George T. Brown, Secretary-Treasurer, c/o Bureau of Labor Standards, U. S. Department of Labor, Washington, D. C. 20210

This Association is composed of heads of State and Provincial departments dealing with labor law administration of the United States and Canada.

The Association develops general labor standards through Com-

mittee action of its own members and safety standards in cooperation with the United States of America Standards Institute. Standards developed by IAGLO Committees are designed to promote uniformity in labor legislation and administration procedures within the various States and Provinces.

Most safety standardization activities of the IAGLO are carried on in cooperation with the United States of America Standards Institute through membership on 52 sectional committees. It also maintains membership on the Safety Standards Board, the Construction Standards Board and the Nuclear Standards Board. The Association is a joint sponsor for four safety codes—The Use, Care, and Protection of Abrasive Wheels; Mechanical Power-Transmission Apparatus; Woodworking Machinery; and Laundry Machinery and Operations.

INTERNATIONAL ASSOCIATION OF ICE CREAM MANUFACTURERS, Robert H. North, Executive Vice President, 910 Seventeenth Street, N.W., Washington, D. C. 20006

This Association has been involved in commodity standards for the past 35 years. It has engaged in simplified practice work and is currently planning to standardize the gallon container for ice cream cartons.

Included in its membership are processors of ice cream, french ice cream, ice milk, sherbets, ices, mellorine-type products and novelties. The Association has approximately 450 active and 800 branch members located throughout the 50 states in the Union. It also represents manufacturers producing approximately 75 percent of the gallonage of ice cream and related products in Canada, and has members all over the world.

INTERNATIONAL CITY MANAGERS' ASSOCIATION, Orin F. Nolting, Executive Director, 1313 East 60th Street, Chicago, Illinois 60637

This Association in the early 1930's developed measurement units for certain public works activities, and manuals describing this system, together with a budgetary accounting system, which were published as a result of installations made in a number of cities. In 1936 and 1937 the Association made a study of measurement techniques then being used in local governments, and in 1938 published a report entitled, "Measuring Municipal Activities," the second edition of which was published in 1943. In 1958 the Association issued, with the help of other national organizations of municipal officials, a "Checklist on How To Improve Municipal Services." This pamphlet contains more than 600 questions which indicate generally accepted standards of service or methods of administration for the guidance of municipal officials. In 1965, the Association published "Program Development and Administration," which includes a technical supplement on program review and evaluation in relation to standards of service.

INTERSOCIETY COLOR COUNCIL, Ralph M. Evans, Secretary, c/o Photographic Technology Division, Eastman Kodak Company, Rochester, N. Y. 14650

This Council grew out of a color conference sponsored by the Revision Committee of the United States Pharmacopoeia in 1930.

Its membership consists of officially designated representatives of 30 national societies and associations interested in the description and specification of color and of individuals interested in color. From its inception, the work of the Council in coordinating and giving advice on problems submitted by its member bodies has been accomplished through committee work. The aims and purposes of the Council are to stimulate and coordinate the work being done by the various societies and other organizations leading to the standardization, description, and specification of color, and to promote the practical application of these results to the color problems arising in science, art, and industry.

The Council has developed standard designations of color first for the description of drugs and chemicals, these designations being used in the latest revisions of the National Formulary and the United States Pharmacopoeia. They also are finding acceptance in many diverse fields, having been published in 1955 as Circular 553 of the National Bureau of Standards under the title, "The ISCC-NBS Method of Designating Colors and a Dictionary of Color Names." It has also developed a method of designating theatrical gelatins. A movement by the Council for standard terminology has resulted in the compilation of a comparative list of 1,100 color terms used by its member bodies. Development of a test for color aptitude has also been completed, the test being made available through the Federation of Societies for Paint Technology.

INVESTMENT CASTING INSTITUTE, R. E. Pritchard, Executive Secretary, 3525 West Peterson Road, Chicago, Illinois 60645

Manufacturers in this association produce metal components by the investment casting process.

The ICI has published recommended dimensional tolerances for investment casting applications.

JEWELERS VIGILANCE COMMITTEE, Leo L. Kaplan, Secretary-Treasurer, 41 East 42nd Street, New York, N. Y. 10017

This is a national organization supported by the jewelry industry at large, specializing in marking, labelling, and other descriptive terminology and related trade practice problems. It has engaged in standardization activities as a major part of its work since its creation in 1913. Particular emphasis has been in the areas of the precious metals, especially in regard to their consumer uses; precious and non-precious stones used in jewelry; and watches. It was instrumental in the drafting and publication of Commercial Standards for Marking Jewelry and Novelties of Silver (1944); Marking of Articles made Wholly or in Part of Platinum (1938); Marking Articles made of Karat Gold (1938); Marking Articles made of Silver in Conjunction with Gold (1935); and Marking of Gold Filled and Rolled Gold Plate Articles Other Than Watch Cases (1934).

Standardization work of the Jewelers Vigilance Committee also contributed significantly to Federal Trade Commission success in developing trade practice rules for the jewelry industry (1957), and for the metallic watch band industry (1962). Current stan-

dardization study involves possible revision of the Federal Trade Commission's trade practice rules relating to watches, including cases and movements, and critical reappraisal of provisions of the National Stamping Act of 1906.

LEAD INDUSTRIES ASSOCIATION, Robert Lindley Ziegfeld, 292 Madison Avenue, New York, N. Y. 10017

This organization has available recommended specifications for lead roofing and flashing, sheet lead membranes for decorative pools and planters, lead-asbestos anti-vibration pads, lead plumbing and other lead applications. In addition to its own work on standardization and simplification, this Association has representatives who serve on committees of the United States of America Standards Institute and American Society for Testing and Materials. It also cooperates with various agencies of the Federal Government in the development of specifications covering lead products.

LIBRARY BINDING INSTITUTE, Dudley A. Weiss, Executive Director, 10 State Street, Boston, Massachusetts 02109

Standards issued by the American Library Association, and subsequently by the Library Binding Institute, have become the basis for the vast amount of library rebinding of worn volumes, of periodicals, and the prebinding of new volumes in bindings which will withstand the rigors of normal library usage.

LINEN SUPPLY ASSOCIATION OF AMERICA, Samuel B. Shapiro, Executive Director, 975 Arthur Godfrey Road, Miami Beach, Florida 33140

This Association is a voluntary organization of linen and towel suppliers and associates. Companies that rent towels and towel-ing, table and bed linens, and washable service apparel to millions of users are the primary members. Companies that sell products and services to linen and towel suppliers are associate members.

Through LSAA, members combine their knowledge, experience and power for the betterment of the industry. They develop programs and achieve objectives which could not be obtained by an individual member or a smaller group of companies.

The objectives of the Association are to promote standardization and simplification of products and to promote activities relating to purchasing practices and procedures, such as cooperative buying, technical research, testing supplies and materials, and uniform contracts purchase. Present work programs along these lines include the following: (1) Specification of standard layouts, methods, and production for laundries; (2) preparation and issuance of standard pressing procedures; (3) codification of standard delivery methods and procedures; (4) annual accumulation and issuance of operating cost data for the industry; (5) specification of uniform accounts classifications and coding for accounting systems; (6) issuance of standard procedures for compiling standard

costing systems; (7) development of minimum requirements for textiles, including tensile strength, thread twist, weave and color fastness; (8) development of blends of synthetic and cotton fibers; (9) testing of press cover fabrics; (10) developing and improving laundry wash formulas and washing chemical specifications; (11) recommending minimum specifications for laundry equipment; (12) establishment of standards for application of electronic data processing systems, controls and methods; (13) issuance of standards for equipment, thread, and methods for sewing rental garments during manufacturing; and (14) specification of standards for grading soiled linens.

MAGNETIC MATERIALS PRODUCERS ASSOCIATION, Thomas D. Dolan, Executive Secretary, 3525 Peterson Road, Chicago, Illinois 60645

Manufacturers in this Association compound and process basic magnetic materials. The Association has produced Standard Specifications for Permanent Magnet Materials. This Standard, MMPA No. 0100-64, has been accepted by the Military Departments of the Government in lieu of Federal Specification QQ-M-60.

Engineering committees are conducting work on standard methods for magnetic testing, magnetization stabilization and measurements.

MALLEABLE FOUNDERS' SOCIETY, L. D. Ryan, Executive Vice President, Union Commerce Building, Cleveland, Ohio 44115

This Society is concerned mainly with technical research and advisory services, assisting its members to maintain standard grades of products, and developing new applications and uses for malleable castings. In carrying on this work, it has sponsored the adoption of the present standard specifications for malleable castings of the American Society for Testing and Materials, as well as those of other technical organizations.

The Society is represented on the ASTM Committee on Malleable Iron Castings. It cooperated with the National Bureau of Standards in the establishment of Simplified Practice Recommendation R79 for malleable foundry refractories, and it assists in the development of Federal and Military Specifications in its field.

MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, Robert V. Warrick, Executive Secretary, 420 Lexington Avenue, New York, N. Y. 10017

This Society, with its predecessor, the Committee of Manufacturers on Standardization of Pipe Fittings and Valves, has been in continuous existence for over 50 years.

The method of carrying on standardization work by the Society is by means of committees selected from the engineering departments of representative manufacturers that are directly engaged in the manufacture of valves and fittings.

At present the Society has about 25 committees working on subjects covering screwed and flanged fittings and valves (ferrous and non-ferrous), marine valves and fittings, marking and terminology, material, screw threads, cast and malleable iron fittings, unions and union fittings, water works, welding fittings, butterfly valves, pipe hangers, plastic valves and fittings, quality standards, etc.

The Society has now in force approximately 25 standard practices which it has developed and adopted. These are for finishes for contact faces of connecting-end flanges of ferrous valves and fittings; spot-facing standard; standard marking system for valves, fittings, flanges, and unions; 125-lb. bronze gate valves; specification for stainless-steel castings for valves, flanges, and pipe fittings; 150-lb. corrosion-resistant cast flanges, flanged valves, and flanged fittings; stainless-steel butt-welding fittings; steel pipeline flanges; bypass and drain connection standard; assembly of steel raised face flanges to cast iron, brass, bronze, or stainless-steel flanges; limiting dimensions of raised face flanged gaskets which meet requirements of USA-B16.5 for Class A Ratings; steel butt-welding fittings (26 in. and larger); 2,000-, 3,000- and 6,000-lb. forged steel screwed fittings; forged steel plugs and bushings; cast iron pipeline valves; quality standard for steel castings for valves, flanges, and fittings; pipe hangers and supports, connecting flange joint between tapping sleeves and tapping valves; hydrostatic testing of steel valves; high strength wrought welding fittings; wrought copper solder-joint drainage fittings; high pressure flanges and threaded stubs for use with lens gaskets; pressure temperature ratings for steel butt-welding end valves; and butterfly valves.

In addition, the Society serves as joint sponsor with the American Society of Mechanical Engineers and the Mechanical Contractors Association of America for the Sectional Committee on Pipe Flanges and Fittings, which resulted in the approval of 28 standards by the United States of America Standards Institute. It is also officially represented on 15 additional USASI Sectional Committees working on the following projects: scheme for the identification of piping systems; specifications for cast iron pipe and fittings; National Plumbing Code; dimensional standardization of plumbing equipment; standardization and unification of screw threads; pipe thread; safety code for mechanical refrigeration; bolt, nut, and rivet proportions; code for pressure piping; standardization of dimensions and materials of wrought iron and wrought steel pipe and tubing; classification and designation of surface qualities; standardization for drawings and drafting room practice; and graphical symbols and abbreviations for use on drawings. It is also represented on committees of the American Society for Testing and Materials dealing with development of specifications for: steel tubing and pipe; valves, fittings, piping, and flanges for high temperature and subatmospheric temperatures; iron castings; iron chromium, iron chromium nickel, and related alloys; copper base castings and ingots for remelting; plastic pipe and fittings; and nondestructive testing.

The Society maintains unofficial representation on committees of the American Society of Mechanical Engineers, American Welding

Society, National Board of Boiler and Pressure Vessel Inspectors, National Fire Protection Association, American Petroleum Institute and the American Water Works Association.

Through its various committees, the Society cooperates with a number of Federal agencies in formulating and revising numerous Government specifications on valves and fittings for both military and civilian use.

MANUFACTURING CHEMISTS' ASSOCIATION, M. F. Crass, Jr.,
Secretary-Treasurer, 1825 Connecticut Avenue, N. W., Washington,
D. C. 20009

This Association, founded in 1872, is one of the oldest and most diversified chemical trade organizations in the United States. The Plastic Materials Manufacturers' Association, Inc., was consolidated with MCA in 1950. The Association bylaws provide that eligible members shall be manufacturers of chemicals who sell to others a substantial portion of the chemicals which they produce.

Early activities included the establishment of recommended strengths of acids with tables of physical properties; recommended specifications for laboratory apparatus, graduates, and thermometers; publication of a table of the elements with chemical and physical data; and short historical sketches of the discovery of the different elements. Assistance to the Congress of the United States in tariff legislation affecting the chemical industry, development of transportation regulations in cooperation with the Bureau of Explosives and Interstate Commerce Commission, and other technical work related to chemicals, were not only part of MCA's early activities but are continuing on a current basis.

The Association has a permanent staff of 62 persons. The wide range of specific activities handled through the Association are administered by staff secretaries to committees which are made up of industry specialists and experts who serve without compensation.

Safety. One of the most widely known activities of MCA is its program of chemical plant safety administered by the Safety and Fire Protection Committee. For its work in this field, the Association has received awards from the American Society of Association Executives, and the National Safety Council, four times in succession. Safety activities include an annual presentation to the two member companies showing the greatest improvement in plant safety over a 5-year period, and annual awards to individual plants of member firms having worked a calendar year without an industrial injury.

The committee sponsors an annual Chemical Industry Safety Workshop for plant supervisors. A major contribution is the publication of manuals known as Chemical Safety Data Sheets, and Safety Guides, which set forth standards for handling, storing, shipping, waste disposal, and other matters pertaining to potentially hazardous substances. Data Sheets have been published to date on 90 hazardous chemicals, and Safety Guides on 19 subjects. Both are distributed world-wide. A sound-and-color film, "Safety in the Chemical Laboratory," has been produced, and a 234-page book, "Guide for Safety in the Chemical Laboratory,"

published. The most recent project has been the publication on an inter-committee basis of highway transportation emergency guides known as MCA Chem-Cards, and of Information Cards for Water Transportation covering barge shipments of certain hazardous chemicals.

Transportation and Packaging. For over 60 years, through its Transportation & Distribution, Chemical Packaging, and Transportation Equipment Committees, the Association has carried on research and development work which has contributed substantially to the present safe methods of shipping hazardous chemicals throughout the world. The work includes the development of new and specialized containers, equipment, handling methods, and procedures for the safe transporting of the multiplicity of chemical products made by the industry. MCA periodically sponsors technical symposia on the transportation and packaging of chemicals, both independently and in cooperation with other national organizations. Publications in this field include Manuals of Recommended Practice for the handling of chemicals in tank cars, tank trucks, portable tanks, drums, and other containers.

Precautionary Labeling. The Labels and Precautionary Information Committee was organized in 1944 to guide chemical shippers on adequate labeling and to give assistance to governmental agencies, when requested, in drafting regulations and laws governing the uniform labeling of potentially hazardous materials. Manual L-1, "A Guide to the Preparation of Warning Labels," is widely used by industry and regulatory agencies, and has served as a basis for drafting regulations.

Environmental Health. Forward planning to aid the chemical industry in meeting its obligations in environmental aspects of manufacturing, transporting, and using its products is the province of the Environmental Health Advisory Committee, with which ten of the Association's other technical and functional committees are affiliated. Fundamental guidelines are contained in a policy statement "The Chemical Industry and Environmental Health" (1964). Environmental engineering, including related legislation and regulations, is the concern of the Air Quality Committee and the Water Resources Committee. "A Rational Approach to Air Pollution Legislation" was first published in 1952, and revised in 1958. Technical activities include regional workshops, sponsored research, and publications such as the "Air Pollution Abatement Manual" and "Water Pollution Abatement Manual." The Food, Drug, and Cosmetic Chemicals Committee deals with technical and legislative matters related to chemicals in foodstuffs, pharmaceuticals, and cosmetics. In 1960 the committee published "How to Proceed Under the Food Additives Amendment."

Plastics. The Plastics Committee undertakes such matters as fundamental research, study of the flammable hazards of plastics in appliances, investigation of the toxicity of combustion products and burning plastics, feasibility of performance standards and certification of plastics components used in building, and research on methods of predicting weatherability of plastics in building.

Metals. In 1958, MCA expanded its program to include the field of ferro-alloys, zirconium, tantalum, columbium, lithium, tita-

mium, and other special "atomic age" metals whose production involves the substantial application of chemical processes. Through the Reactive Metals Advisory Committee and the Government Liaison Technical Committee, activities cover legislative, technical, national stockpile problems and other matters of interest.

Industrial Relations. The Association collaborated with the Chamber of Commerce of the United States and other groups in publishing "Principles and Practices of College Recruiting." A labor reporting service for MCA members is maintained.

Research. MCA sponsors and finances research of a fundamental nature in five institutions: (1) Washington University (St. Louis)—Studies of the behavior of organic chemicals in aquatic environment to learn how they are changed or decomposed by biological action in natural waters or during sewage treatment; (2) Texas A. & M. University—Basic research on properties of chemical compounds; (3) Case Institute of Technology, and (4) Massachusetts Institute of Technology—Projects involve fundamental engineering properties of plastics; (5) National Bureau of Standards—Study of long-term weatherability of plastic products.

Other Committee Activities. These include Ammonium Nitrate, Insurance, Legal Advisory, Research Advisory, Medical Advisory, Mechanical Technical (voluntary standardization of process equipment), Nuclear, Technical Committee on Rocket Propellant Safety, Patents, Tax Policy, International Trade, Education, Government Relations, Public Relations, (including a Chemical Industry Council's community relations program and a Women's Activity Program), and an Information Service which includes a library.

Technical Publications. MCA publishes more than 300 different pieces of technical and informational literature, as well as films and filmstrips, pertinent to the chemical industry. Approximately 1,000 copies of each new technical publication are issued free to State and Federal officials, health departments, technical and medical school libraries, and others. A publications list is available on request.

MAPLE FLOORING MANUFACTURERS ASSOCIATION, L. M.
Clady, Secretary-Manager, 35 East Wacker Drive, Chicago, Illinois 60601

One of the prime objects of this Association is to establish and enforce uniform grades and standards of products; to constantly improve methods of manufacture; and to make the Association trademark a symbol of excellence in methods and materials. Through its Grades Committee, this Association has established grading rules for Northern Hard Maple, Beech, and Birch Flooring. For the protection of the specifier and consumer, the Association requires its members and encourages other hardwood flooring manufacturers to properly and clearly grade mark and species market their entire flooring product. The letters MFMA on maple, beech, or birch flooring signify that the flooring is standardized and guaranteed by the Association to be in accordance with the current established grading rules.

This Association has also adopted specifications for heavy duty and for gymnasium-type floor finishing products for Maple, Beech and Birch floors. For this project, the Association employs the services of a commercial testing laboratory. The specifications are revised every three years for the purpose of improving performance characteristics of the heavy duty and gymnasium floor finishes. Products which have met these specifications and have been certified to the Association, will receive its written approval. A list of MFMA endorsed and approved finishes is published at intervals during the 3-year period. The Association reserves the right of withdrawal of its approval on substantial evidence of depreciating the quality of the product.

MARBLE INSTITUTE OF AMERICA, John E. Shackelford, Managing Director, 848 Pennsylvania Building, Washington, D. C. 20004

The Institute is an organization composed of quarriers, importers, wholesalers, finishers and contractors of marble, formed to establish standards for marble and the quality of workmanship related to its use.

This Institute has accumulated a vast amount of information from the domestic and foreign marble producing and finishing centers of the world, and is in a position to give to architects, engineers, builders, and others interested in marble, authentic information regarding the available marbles of the world.

Through the United States of America Standards Institute, the Institute has helped to produce the following USA Standards: Standard Specifications for Interior Building Marble (A.94.1-1962); Standard Specifications for Thin Exterior Marble Veneer (A.94.2-1961); and Thin Exterior Marble in Curtain or Panel Walls (A.94.3-1961).

MARKING DEVICE ASSOCIATION, Thomas H. Brinkmann, Executive Secretary, 1611 Chicago Avenue, Evanston, Illinois 60201

This Association prepares standards for various kinds of metal marking tools and dies. Included are standards for size and depth of marking characters, styles of symbol stamps, stock sizes for steel letters and figures, and stock sizes for various stamp blanks. Other standards in use by members of the organization include those for bores and keyway sizes for roll dies, roller die blanks, and type and type holders for interchangeable steel type.

The Association also develops standard terminology for all kinds of marking devices, including metal marking tools and dies, rubber stamps, seals, stencils, and marking inks.

MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, Leon B. Kromer, Jr., Executive Vice President, 666 Third Avenue, Suite 1464, New York, N. Y. 10017

Two committees of this Association are actively engaged in standardization activities. The Committee on Standards has for its objectives the standardization of materials and design for

installation of heating, piping, and air-conditioning work; also, the cooperation with other bodies interested in standardization and representation of the industry on standardization projects developed under the procedure of other organizations.

The Committee on Welding is engaged at the present time in the standardization of welding procedures for pipe welding, both by the use of electric arc and oxyacetylene.

Through its Committee on Standards, this Association has developed standard rules for determining the amount of radiation required to properly heat a given space. It has also compiled data with reference to the proper types and sizes of boilers recommended for specific installations.

In the book on engineering standards developed by the committee, there are included rules for determining the amount of radiation required to heat a given space properly; the net load recommendations for low-pressure heating boilers; ratings for base-board convectors and finned-tube radiation; testing and rating codes for residential and commercial boiler-burner units; pipe sizes for steam heating and hot water systems; radiant panel heating; standard welding procedures; dimensions of valves, fittings, and materials; and standards for air-conditioning installations.

A division of the National Association, the National Certified Pipe Welding Bureau develops and tests standard procedure specifications for pipe welding which are the basis of a program for testing pipefitter welders under these standard procedures.

The Association cooperated with the National Bureau of Standards in the establishment of Commercial Standards CS5-40 for genuine wrought iron pipe nipples and CS7-29 for standard weight malleable iron or steel screwed unions; also in the development of Simplified Practice Recommendation R90-36 relating to sizes of hacksaw blades.

The Association is joint sponsor with the American Society of Mechanical Engineers and the Manufacturers Standardization Society of the Valve and Fittings Industry for the Sectional Committee on Pipe Flanges and Fittings functioning under the procedures of the United States of America Standards Institute. In addition, it is represented on USASI sectional committees dealing with the following subjects: code for pipe threading; code for pressure piping; standardization of dimensions and materials of wrought iron and wrought steel pipe and tubing; standards for drawings and drafting room practice; approval and installation requirements for gas-burning appliances; graphical symbols and abbreviations for use on drawings; and scheme for identification of piping systems.

MECHANICAL POWER TRANSMISSION ASSOCIATION, T. D.

Dolan, Executive Secretary, 3525 West Peterson Road, Chicago, Illinois 60645

Manufacturers in the Association produce V-belt drives and parts thereof. They also produce other power transmission machinery such as flat belt pulleys, couplings, collars, hangers, pillow blocks, journal bearings, shafting, babbitted pillow blocks, and steel conveyor pulleys.

The Association has produced Standard Specifications for Multiple V-Belt Drives, Narrow V-Belt Drives, Welded Steel Conveyor Pulleys and Rigid Babbitted and Bronze Bearing Load Ratings. Engineering liaison for the promulgation of voluntary standards is maintained with USASI, ASME, RMA, API and ISO TC-41 (Pulleys and Belts in the development of international standards).

MELLON INSTITUTE, Charles B. Willingham, Head, Professional Relations, 4400 Fifth Avenue, Pittsburgh, Pennsylvania 15213

This institution is an endowed, nonprofit, corporate body for conducting comprehensive investigations on important problems in the fundamental and applied natural sciences, for training research workers, and for providing technical information adaptable to professional, public, and industrial advantage.

The Institute has carried out studies that have resulted in a monograph entitled, "Government Purchasing and Competition" (University of California Press, Berkeley, California, 1954), articles on "The Role of Company Standards in Industrial Administration," and a book on "National Standards in a Modern Economy" (Harper and Brothers, New York, N. Y., 1956). Research specialists of Mellon Institute have also made a study on industrial standardization in cooperation with the National Industrial Conference Board.

Representation is maintained by Mellon Institute on technical society committees concerned with water, petroleum and its products, and glass. The Institute collaborates with all agencies that wish its cooperation in the field of standards. In the past, many additions have been made to the knowledge of consumer standards, including textiles and household commodities.

Various research undertakings of the Institute have also been active in the field of standardization. Much of this work has involved the development of analytical methods, physical testing procedures, and facts for use in the preparation of specifications.

The Industrial Hygiene Foundation of America, which has its headquarters in Mellon Institute, operates collaboratively with various national societies and governmental agencies, through its scientists and committees composed of specialists. The Air Pollution Control Association has its secretariat and editorial offices in the Institute. APCA issues the Journal of the Air Pollution Control Association, APCA News and APCA Abstracts. The publications of both IHF and APCA have enriched the knowledge of testing and research procedures in the domain of urban smoke control. The IHF, through "Industrial Hygiene Digest," transactions, and special bulletins and papers, has added much to the literature of occupational health.

METAL BUILDING MANUFACTURERS ASSOCIATION, Thomas Associates, Inc., General Manager, 2130 Keith Building, Cleveland, Ohio 44115

The standardization work of the Association is carried on by the Technical Committee. The work of this committee consists of preparation of recommendations concerning such projects as meth-

ods used in application of design loads, recommended minimum thicknesses of steel to be used in manufacturing metal buildings in order to assure proper service, and other general recommendations for use by model code bodies in preparing or revising these codes in order to have properly constructed metal buildings. The Technical Committee of the Association works in conjunction with the American Iron and Steel Institute, model code bodies, and other code committees in order to assure users of metal buildings that proper installations are made.

The Association has published "Recommended Design Practices Manual" (revised in 1963); "Recommended Guide Specifications for Pre-engineered Metal Buildings" (published in 1964); and "Code of Standard Practices" (revised in 1964).

METAL CUTTING TOOL INSTITUTE, Perry L. Houser, President, 405 Lexington Avenue, New York, N. Y. 10017

One purpose of the Institute is to promote standardization of sizes, dimensions and tolerances of rotary type, multiple point, metal cutting tools, such as twist drills, reamers, taps, milling cutters, and gear generating tools, and to simplify these in cooperation with the United States of America Standards Institute, American Society of Mechanical Engineers and other national and international bodies, with a view to eliminating waste and reducing costs. In this regard, the Institute actively participates in technical and advisory committees of major national standardizing bodies.

Results of such activity are reflected in widely promulgated USA Standards on twist drills, reamers, taps, and milling cutters. These standards form the basis of Federal Specifications and individual company standards, as well as reflecting current United States industry practice in the formulation of ISO Standards.

The Institute publishes "Metal Cutting Tool Handbook" and such pamphlets as "Metal Cutting Tool Nomenclature," "Drilling Today's Materials," "Drilled Holes for Tapping," "Tolerances for Twist Drills and Reamers," "Milling Cutters and End Mills—Application and Sharpening," and "Standards and Dimensions for Taps and Dies."

METAL LADDER MANUFACTURERS ASSOCIATION, R. L. Werner, Secretary, Box 580, Greenville, Pennsylvania 16125

One of the most important activities of this Association is to participate in the development and promulgation of safety standards pertaining to the products manufactured by its members. Specifically, the MLMA has developed, and will continue to develop, revised versions of its safety standard entitled "Safety Code for Portable Metal and Fiberglass Ladders."

In addition, members of the Association are actively engaged in the work of the following United States of America Standards Institute committees developing safety codes: (a) The A14 Committee which is working on revisions to USA A14.2-1956 Safety Code for Portable Metal Ladders; (b) the USASI A92 Committee

working on USA A92.1 USA Standard Safety Code for Mobile Scaffolds, Ladder Towers and Telescopic Work Platforms; and (c) the A10 Committee which is working on revisions to the Construction Code and its various Subsections. This committee is developing a revision to USA A10.8 USA Standard Safety Code for Building Construction Safety Requirements for Temporary Scaffolding.

METAL LATH ASSOCIATION, Richard N. Parker, Managing Director, Engineers Building, Cleveland, Ohio 44114

Membership in the Association is composed of manufacturers of metal lath, expanded stucco mesh, and metal plastering accessories. The U. S. Department of Commerce, aided by recommendations of the Association, published Simplified Practice Recommendation R3-60, Metal Lath (Expanded and Sheet) and Metal Plastering Accessories, effective April 1961.

The Association supports the United States of America Standards Institute and has a membership in Sectional Committee A42 which has issued USA Specification A42.1-1964, USA Standard Specifications for Gypsum Plastering, and A42.4-1955, USA Standard Specifications for Interior Lathing and Furring.

The Association also has membership in the American Society for Testing and Materials, being represented on Committees E-5 and E-6, whose respective activities concern standard methods of tests for fire resistance and strength tests of panels for building construction.

The Association has issued its own recommended standard specifications for installation of metal lath and expanded stucco mesh for use as a base gypsum plaster, and portland cement stucco, respectively. One publication devoted to specifications only is entitled "Specifications for Metal Lathing and Furring." Another publication includes descriptive information on various types of assemblies of metal lath and plaster and also contains many details of construction. This latter publication is known as "Metal Lath Technical Bulletin Binder." "The Metal Lath News," a quarterly publication, contains standard technical bulletins for the binder.

METAL POWDER INDUSTRIES FEDERATION, Kempton H. Roll, Executive Director, 201 East 42nd Street, New York, N. Y. 10017

Standardization is one of the major activities of the Federation and the various trade associations operating within its structure which is made up of the American Powder Metallurgy Institute, Metal Powder Producers Association, Powder Metallurgy Parts Manufacturers Association, Magnetic Powder Core Association, In-Plant Powder Metallurgy Association and Powder Metallurgy Equipment Association.

About 38 standards have been issued in the field of powder metallurgy and magnetic cores. Basically they all deal with industry practices; i.e., methods of testing, preferred dimensions and tolerances, terminology, etc. Copies may be obtained from the office of the Federation.

MILK BOTTLE CRATE MANUFACTURERS COUNCIL, Thomas Associates, Inc., Commissioners, 2130 Keith Building, Cleveland, Ohio 44115

The standardization and simplification activities of this association are carried on by the Simplification and Standardization Committee. Its work has been confined to simplification matters dealing with development of minimum pocket sizes and minimum dimensions of the crate in order to insure proper interstacking of milk bottle crates. This information is contained in Simplified Practice Recommendation R236-54 (as amended March 6, 1958), published by the Commodity Standards Division (now Product Standards Section) of the U. S. Department of Commerce.

MILK INDUSTRY FOUNDATION, Robert H. North, Executive Director, 910 Seventeenth Street, N.W., Washington, D. C. 20006

The Foundation, cooperating with the U. S. Public Health Service and members of the Dairy Industry Committee, has for a number of years engaged in standards work on containers for dairy products, pumps, pipelines and connections, and fluid milk processing equipment. This is a continuing project with new standards being prepared each year and revisions made to existing standards as circumstances require. The standards, when published, are available in single copies from the Milk Industry Foundation, 910 Seventeenth Street, N.W., Washington, D. C. 20006. Standards are available in quantity from the International Association of Milk and Food Sanitarians, Box 437, Shelbyville, Indiana.

MOBILE HOMES MANUFACTURERS ASSOCIATION, Edward L. Wilson, Managing Director, 20 North Wacker Drive, Chicago, Illinois 60606

This is a trade association serving the mobile home and travel trailer industries. An important part of the Association's activities has to do with the development of industry standards, and the monitoring of the industry to assure compliance with its adopted standards.

As a cosponsor, along with the Trailer Coach Association (West Coast), the Association has to date developed two standards, each embracing the installation of plumbing, heating, and electrical systems in both mobile homes and travel trailers. Both standards were submitted to the United States of America Standards Institute, processed through their sectional committee procedure, and ultimately adopted as USA Standards A119.1 and A119.2.

The Association is presently engaged in the development of construction standards for the body, frame, chassis and running gear for both mobile homes and travel trailers.

MONORAIL MANUFACTURERS ASSOCIATION, L. West Shea, Secretary, 250 Gateway Towers, Pittsburgh, Pennsylvania 15222

The standard specifications for Overhead Track Systems which were approved in 1938 were completely revised in 1955. These specifications cover track, suspension fittings, manually operated

trolleys or carriers, switches, cranes and transfer bridges, specifications for wire-rope electric hoists, electric hoists and travel carriers, and wiring.

**NARROW FABRICS INSTITUTE, Penn Affiliates Inc., Managers,
271 North Avenue, New Rochelle, N. Y. 10801**

This Institute was organized in 1956 to promote, in every lawful manner, the common interests of manufacturers, distributors and consumers of woven nonelastic narrow fabrics.

Cooperation with pertinent agencies on Government narrow fabrics specifications is one of the Institute's important functions. And, in the same general area, the Institute has undertaken a program to promote commercial standardization and simplification covering nomenclature, definitions, construction, dimensions, tolerances, etc.

Narrow fabrics enter into every form of productive enterprise including agriculture, mining, building construction, manufacturing, and the retail trade. Because narrow fabrics products and their end uses are so varied, a first objective has been to develop a common language to facilitate communication among the trade. Accordingly, as complete a listing as possible of narrow fabrics products by end-use applications is presented in a pamphlet published by the Institute entitled "Woven Nonelastic Narrow Fabrics." This pamphlet also contains recommended standard definitions of the narrow fabrics industry, and of woven nonelastic tape and webbing. The latter definitions have been approved by the American Society for Testing and Materials.

**NATIONAL ACADEMY OF SCIENCES—NATIONAL RESEARCH
COUNCIL, Frederick Seitz, President, 2101 Constitution Avenue,
N.W., Washington, D. C. 20418**

The National Academy of Sciences is a private, nonprofit organization dedicated to the furtherance of science and its use for the general welfare, and required by its Congressional Charter of 1863 to act as an official adviser to the Federal Government, upon request, in all matters of science and technology. Its members, now numbering about 700, are elected in recognition of their distinguished and continuing achievements in original research. The National Research Council was established by the Academy in 1916 to enable the broad community of U. S. scientists and engineers to associate their efforts with the limited membership of the Academy in service to science and the nation. The members of the Research Council, numbering about 260, are drawn from academic, industrial, and government organizations throughout the country. Representatives of more than 100 scientific and technical societies, designated members of government scientific agencies, and members-at-large receive their appointments from the president of the Academy.

The overall organization has come to be known as the National Academy of Sciences—National Research Council. Its primary aim is to bring together the most competent scientists and engineers of the country in appropriate groups to deal with scientific problems and to exchange information in furtherance of research. The undertakings of the Academy-Research Council

vary widely in nature and in the duration and type of effort required; the patterns of organization are kept flexible to permit each problem to be approached in a suitable manner.

The Academy-Research Council does not maintain laboratories of its own, but seeks to stimulate and support the work of individual scientists and to coordinate investigations dealing with broad problems in research, both nationally and internationally. This is carried out through a wide variety of means, including conferences, technical committees, surveys, collection and collation of scientific and technical data, the sponsorship of scientific publications and research organizations, and the administration of public and private funds for research projects and fellowships. The Academy-Research Council provides unique means for organizing attacks on scientific problems which involve many specialized fields and for obtaining disinterested and objective assessments of problems for groups representing dissimilar or conflicting interests. The effectiveness of the Academy-Research Council is dependent on the personal participation of thousands of American scientists who collaborate in these undertakings, giving generously of their time and effort without financial compensation.

Since the activities of the Academy-Research Council are directed largely toward stimulating and facilitating scientific research, rather than its conduct or direction, the program in the field of standardization is necessarily quite limited. However, the Academy-Research Council has been called upon from time to time to undertake such assignments at the request of government and other agencies. These activities normally fall within one of the eight divisions of the Academy-Research Council—Behavioral Sciences, Biology and Agriculture, Chemistry and Chemical Technology, Earth Sciences, Engineering and Industrial Research, Mathematics, Medical Sciences, and Physical Sciences. These divisions carry on their work through boards, institutes, committees, and panels, as well as ad hoc groups for special projects. Interdisciplinary problems often give rise to interdivisional committees. Such standardization activities as are undertaken by the Academy-Research Council are listed below, according to the divisions which supervise their operation.

Behavioral Sciences. None at this writing.

Biology and Agriculture. The Institute of Laboratory Animal Resources, which serves as a central agency for correlating information on animal stocks used in biological, agricultural, and medical research, assay, testing and teaching, has published a three-part guide entitled "Laboratory Animals," which covers shipment of small animals, sources of animals, equipment and feed, and minimum standards for the shipment of laboratory primates. The Institute maintains a Committee on Standards, with subcommittees on dog standards and rabbit standards. It also issues a quarterly digest, "Information on Laboratory Animals for Research." The Committee on Animal Nutrition of the Division's Agricultural Board has prepared a series of ten reports dealing with the nutrient requirements of various domestic animals. Under the Food and Nutrition Board, a Food Chemical Codex is in preparation, establishing standards of identity and purity for the chemicals used as intentional additives in foods. The Board itself

has recently issued a revision of its "Recommended Dietary Allowances," intended as a guide to the maintenance of complete healthful nutrition. Its Food Protection Committee considers standards that affect food processing, production, and storage.

Chemistry and Chemical Technology. Through its Advisory Center on Toxicology and Office of Critical Tables, the Division advises on tolerances for industrial substances that might constitute a hazard for personnel, and recommends standards of quality and form of presentation for the compilation of critical numerical data on chemical compounds. The Committee on Symbols, Units, and Terminology, operating jointly under this Division and the Divisions of Engineering and Industrial Research and Physical Sciences, coordinates for the United States national and international interest in symbols, units, and terminology in all areas of the physical sciences. It also functions on behalf of the United States of America Standards Institute as "USA Committee 12" in its interdisciplinary program on quantities, units, and symbols.

Earth Sciences. A Committee on Seismology advises government agencies on the World-Wide Network of Standardized Seismograph Stations. Under the Committee on Oceanography, panels on Biological Methods, Chemical Methods, and other areas of oceanic investigation are concerned with standards of data collection and dissemination.

Engineering and Industrial Research. There are many units in the Division whose activities are closely related to establishing standards or codes; but it is the intent of the Division that actual formulation of standards be avoided. Rather, units are expected to help supply scientific and technical data on properties and performance to assist responsible standards writing groups.

Highway Research Board. In its several road tests, "Maryland," "WASHO" and "AASHO," the Board has developed a wealth of basic data that are needed by those who formulate standards for materials, foundations, construction, maintenance, and traffic operation of the highways of the country. Similar data leading to standardization are developed continuously in the activities of standing committees of various departments of HRB.

Ship Hull Research Committee. This Committee's activities cover the fields of materials, design, fabrication, and inspection as related to merchant ship hulls.

Advisory Board on Military Personnel Supplies. This Board and its several committees provide scientific and technical advisory services to the U. S. Army Natick Laboratories on matters of military clothing, food, and shelter.

Building Research Advisory Board. BRAB advisory services are used by the Federal Housing Administrator in the establishment of the "Minimum Property Requirements" of FHA which are the standards of building construction which determine the insurability of housing construction by the Federal Government. BRAB operates the Federal Construction Council, a voluntary correlating group of some eight or ten Federal agencies with major building construction responsibilities. The deliberations of this Council lead also to certain standards or accepted practices in

materials, methods, and designs employed in a great volume of Federal building activities.

Mathematics. None at this writing.

Medical Sciences. The Division is not regularly engaged in standardization activities, but does undertake projects of this nature from time to time at the request of Federal and quasi-governmental agencies. These commonly concern the evaluation of drugs and other medical items proposed for inclusion in military or civil defense supply tables, and of devices and processes significant to sanitation. Examples drawn from past and present activities are the evaluation of plasma volume expanders and of plastic transfusion equipment; the development and testing of a proposed cyanmethemoglobin standard for hemoglobinometry; sponsorship of the handbook "Coagulation of Blood; Methods of Study," by Tocantins; review of standard first aid procedures for the American National Red Cross; evaluation of the addiction liability of new narcotics; recommendation of a scale for rating hearing disability on the basis of audiometric measurements; and the establishment of criteria or standards relating to machine dishwashing, water and sewage treatment, air-conditioning, air contamination, plastic piping for potable water systems, and other sanitary engineering problems.

Physical Sciences. Several committees of the Division concern themselves with standardization activities as part of their overall program. Among these are the following: The Committee on Symbols, Units, and Nomenclature cooperates with U. S. activities and international scientific unions and commissions in coordinating the recommendations and views of major United States scientific and technical activities concerned with standardization of symbols, units and nomenclature in the physical sciences; the Committee on Line Spectra of the Elements surveys the field and directs attention to significant problems for investigation, encourages group attack on related aspects of major problems, and compiles data on atomic spectra. The Committee on Nuclear Science has a number of subcommittees which form research conferences and review articles, monographs and special reports, and make available data and recommended standards, constants, and procedures for benefit of other scientific groups, government, and industry. These subcommittees are also concerned with measurements and standards of radioactivity, neutron measurements and standards, nuclear constants, and shipment of radioactive substances. A number of technical panels, organized to conform with divisional activities of the National Bureau of Standards, advise and assist the Director of the Bureau in evaluation and planning.

The Academy-Research Council has published or has been responsible for the publication of many individual reports or series of reports dealing with some aspect of standardization. Among these are "International Critical Tables of Numerical Data; Physics, Chemistry, and Technology" (7 volumes and index); "Data on Chemicals for Ceramic Use"; "Tables of Chemical Kinetics, Homogeneous Reactions" (with supplement); "Method of Coding Chemicals for Correlation and Classification"; "A Glossary of Terms in Nuclear Science and Technology"; "Principles and Procedures for Evaluating the Safety of International Chemical

Additives in Foods"; "Status Report on Standardization of Radionuclides in the United States"; and "Measurements and Standards of Radioactivity."

NATIONAL-AMERICAN WHOLESALE LUMBER ASSOCIATION, J. J. Mulrooney, Executive Vice President, 180 Madison Avenue, New York, N. Y. 10016

One of the objects of this Association is to aid and more efficiently distribute all lumber and forest products through standardization of grades and sizes, and through the elimination of unfair practices and trade abuses, in cooperation with proper governmental agencies and officials. This Association's activities in standardization are carried on in cooperation with the American Lumber Standards Committee on which it maintains official representation in the development of American Lumber Standards. The Association endorses the principle of grade-marking all lumber and will appoint special committees when occasion requires, to consult and cooperate with grade-marking committees of lumber manufacturers' associations for the grade-marking of lumber of various species.

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS, Wayne F. Koppes, Technical Director, 228 North LaSalle Street, Chicago, Illinois 60601

This Association, founded in 1939, consists of manufacturers of architectural, ornamental, and miscellaneous ferrous and nonferrous metals, including aluminum, brass, bronze, cast iron, nickel, silver, steel and wrought iron. The Association has developed and sponsors a number of standards, many of which are widely recognized and used in the building industry. Those published in the NAAMM Metal Curtain Wall Manual include: (a) Standards for Joint Sealants (1960)—Specifications for Non-Skinning Bulk Compounds, Specifications for Non-Skinning Resilient Preformed Compounds, Specifications for Non-Skinning Non-Resilient Preformed Compounds, Specifications for Narrow Joint Sealants; (b) Standards for Glass Insulating Materials (1960)—Specifications for Cellular Glass Insulation, Specifications for Flexible Fibrous Glass Insulation, Specifications for Preformed Fibrous Glass Insulation; and (c) Standards for Testing Walls and Windows—Specifications for Performance Testing of Metal Curtain Walls (Revised 1962) (tests for structural performance at room temperature, static pressure tests for air infiltration, static pressure tests for water infiltration, dynamic pressure tests for water infiltration), Specifications for Load Testing of Metal Windows (1960). Another NAAMM standard, published in the NAAMM Finishes Manual, is Standard Designation System for Architectural Finishes on Copper Alloys (1964).

NATIONAL ASSOCIATION OF BEDDING MANUFACTURERS, A. S. Roistacher, Executive Vice President and General Manager, 724 Ninth Street, N.W., Washington, D. C. 20001

One of the important activities of this organization is the promotion of Federal laws and Federal Trade Commission rules and regulations relating to the production and sale of sanitary

and honestly labeled bedding products, with compulsory requirements for labeling bedding products in regard to kind and prior usage of filling materials.

Through an Industrial Committee, this Association has cooperated with the National Bureau of Standards in the establishment of Simplified Practice Recommendations R2-62 for bedsteads, springs, and mattresses; and R24-37 for hospital beds; in the development of Commercial Standards CS54-35 for mattresses for hospitals; and CS55-35 for mattresses for institutions, all of which have been published by the National Bureau of Standards. This committee is continuing its representation on the standing committees of the above Simplified Practice Recommendations and Commercial Standards for future revisions of these documents.

This Association is also collaborating with the United States of America Standards Institute with reference to certain standards relative to items or commodities entering into the manufacture of mattresses.

NATIONAL ASSOCIATION OF BLUEPRINT AND DIAZOTYPE COATERS, Preston B. Bergin, Executive Secretary, 1925 K Street, N.W., Washington, D. C. 20006

This Association was formed in November 1954 to further the interests of the coaters of blueprint and diazotype ultraviolet light sensitive materials, and the users of these materials. Its 32 member firms include 19 located in all parts of the United States and represent more than 90 percent of the industry's production. The activities of the Association are carried out through 14 standing committees and one of these, the Technical Practice and Standardization Committee, concerns itself with an effort to simplify and standardize the industry's product lines.

The Association sponsored, through the Commodity Standards Division (now Product Standards Section), U. S. Department of Commerce, Simplified Practice Recommendation R260-57, which lists the sheet and roll sizes of blueprint and diazotype papers which are the dominant production and stock items in the industry. This committee also developed "Glossary—an Explanation of the Terms, Processes and Methods Employed in the Coating of Blueprint and Diazotype Ultraviolet Light Sensitive Materials. . . ." It also is active in developing product specifications and sensitometric procedures for measuring the light sensitivity of these materials. These procedures are embodied in the NABDC Sensitometer, an instrument developed by the Association through its technical committee.

NATIONAL ASSOCIATION OF BROADCASTERS, George W. Bartlett, Manager of Engineering, 1771 N Street, N.W., Washington, D.C. 20036

The NAB Recording and Reproducing Committees have established standards for recording and reproducing in which more than 100 of the Nation's authorities on the various phases of recording participated. The current standards were approved during the period 1964 and 1965 by the Association's Board of Directors.

The Standards pertain to the recording and reproducing of Disc, Cartridge Tape, and Reel-to-Reel Magnetic Tape, as well as methods of measurement. They include standard playback curves, response limits and criteria for establishing test records and tapes. The tape reel-to-reel standards also contain mechanical dimensions for reel flanges and hubs. A glossary of terms is included. These are professional standards promulgated primarily for the Broadcasting Industry.

NATIONAL ASSOCIATION OF BUILDING OWNERS AND MANAGERS, Thomas D. Laney, Executive Vice President, 134 South LaSalle Street, Chicago, Illinois 60603

This Association is essentially a service organization, and its membership represents a substantial part of the larger commercial properties of the country. In connection with its other activities, this organization devotes time and attention to matters relating to standardization. As long ago as 1915, the Association adopted a standard method of floor measurements for the office building industry, and has developed standard methods of rating space. It has also prepared standard practices in accounting and a uniform chart of accounts.

The Association makes studies of operating costs and rental conditions, lease percentage rates, and kindred matters for the purpose of developing standard types of information for the guidance of the industry. It publishes an annual Office Building Experience Exchange Report dealing with economics, and conducts a Building Planning Service applicable to new construction.

It has cooperated with various sectional committees functioning under the procedures of the United States of America Standards Institute, acting as cosponsor of proposals for USA Standards on floor measurement in buildings of different types, and being currently represented on USASI sectional committees on Safety Code for Elevators and Modular Coordination.

NATIONAL ASSOCIATION OF CHAIN MANUFACTURERS, R. L. Ekstrand, Executive Secretary, 111 West Washington Street, Chicago, Illinois 60602

Simplification, standardization and specifications of chains form an important part of the activities of this organization. In previous years the Committee on Simplified Specifications of the predecessor organization sponsored the movement for the reduction in the number of sizes of chains appearing in the manufacturers' catalogs. This resulted in the formulation of Simplified Practice Recommendation R100-47, covering standard stock items of Welded Chains and Simplified Practice Recommendation R245-51, covering Weldless Chain and Chain Products, published by the National Bureau of Standards, U. S. Department of Commerce.

Through its Committee on Tire Chain Specifications, the Association has prepared, and keeps constantly under revision, specifications for many types of tire chains relative to material, physical dimensions, tolerances, and other requirements for the various sizes and dimensions of pneumatic tires. The Association's Com-

mittees on Welded and Weldless Chain Specifications cooperate with the Federal Government, as necessary and desirable, in revising the Federal Specification covering standard miscellaneous chains and attachments, as well as with the American Society for Testing and Materials on chain specifications.

NATIONAL ASSOCIATION OF CORROSION ENGINEERS, T. J. Hull, Executive Secretary, 980 M & M Building, Houston, Texas 77002

Through its Technical Practices Committees, this Association is engaged in preparing standards to promote the use of the best technical practices, to reduce the cost of corrosion prevention, and to increase the safety of industrial, public, and private installations where corrosion damage could create hazards. NACE does not issue standards that duplicate adequate existing standards of other organizations. Applicable areas for issuance of NACE standards include the following: Corrosion tests and methods of measurement, materials qualification tests, analytical procedures relating to the identification of materials in corrosion investigations, corrosion prevention procedures, minimum requirements for application of materials, durability of serviceability tests, methods of design to minimize corrosion, criteria of effectiveness of corrosion control measures, methods of evaluation of test data, economic analyses of materials and methods, definitions and terminology, and reporting of firm data used to describe the parameters of use of a material or a system to avoid or reduce corrosion.

NATIONAL ASSOCIATION OF FINISHERS OF TEXTILE FABRICS, Joseph E. Hoesl, Secretary, 350 Fifth Avenue, New York, N. Y. 10001

This Association, which represents textile bleaching, dyeing and printing plants principally engaged in finishing cotton fabrics, limits its activity in this field to reviewing the various standards for textiles that are proposed by the Federal Government, technical societies, trade associations or consumer groups. Its function is to determine if the proposed standards are practical in actual plant operation on an industry-wide basis. In this respect it has participated in the development of standards for: flammability of textiles, water repellency, shrinkage, color fastness and the new wash-and-wear finishes. It reviews proposed standard test methods and its chief concern is to determine if the test method is reproducible on an interlaboratory basis and is practical in day-to-day plant operations.

NATIONAL ASSOCIATION OF FOOD CHAINS, James E. Bell, Jr., Services Director, 1725 Eye Street, N.W., Washington, D. C. 20006

Standardization activities of this Association include work in the following areas: (1) Standard invoices; (2) standardization of pallets; (3) development of industry code numbers for products; and (4) research on the shape and type of containers used to transport food products.

NAFC is working with supplier associations in the produce, meat and dry groceries areas in encouraging the use of standard invoice forms. The utilization of these forms is aimed at reducing the processing time in handling supplier invoices.

As a trade association, NAFC played a vital part in the adoption of the 48 in. by 40 in. four-way hardwood pallet as the standard pallet for the food industry, and the suggested alternative size which is 32 in. by 40 in. Increased unitization of shipments with standard pallets has substantially reduced the cost of moving food products for the manufacturer or the consumer.

NAFC is also working with produce suppliers to make nonbulge pack produce containers available as standard containers. These nonbulge pack containers are aimed at delivering produce to the consumer with less damage than the bulge pack container.

Because of the difficulty in palletization of square cases, NAFC is encouraging the adoption of case shapes more conducive to palletization. Standard item codes for all food products is also an area of NAFC activity.

NATIONAL ASSOCIATION OF FOOD EQUIPMENT MANUFACTURERS, William W. Carpenter, Executive Secretary, 333 North Michigan Avenue, Chicago, Illinois 60601

The Association is concerned with equipment standards and practices in the field of commercial food preparation and service. Standardization activities include research and educational programs in food-service layout, refrigeration, dishwashing and dish-handling. The Advisory and Emergency Feeding Committee works in cooperation with government and civil defense agencies concerned with mass feeding in times of emergency. It maintains close liaison, for cooperative effort in standardization, with Food Facilities Engineering Society, National Sanitation Foundation and other industry groups.

NATIONAL ASSOCIATION OF FROZEN FOOD PACKERS, Lawrence S. Martin, Executive Vice President, 919 18th Street, N.W., Washington, D. C. 20006

This Association maintains a Container Simplification Committee which concerns itself with development of standards for frozen food containers of fiber and metal for industrial as well as retail use. The committee serves as a clearinghouse for problems in this area, conducts surveys to determine industry requirements and follows through as necessary to effect appropriate standards.

The Association has published, through the Commodity Standards Division (now Product Standards Section), U. S. Department of Commerce, a detailed Simplified Practice Recommendation for retail packages of frozen foods. It is currently engaged in a similar project for institutional size containers, and work is under way on standardization of packages for prepared frozen foods and of case sizes. In addition, the Association is actively engaged in work to standardize shipping cases and pallet sizes.

NATIONAL ASSOCIATION OF GLUE MANUFACTURERS,
Arnold J. Palmer, Secretary, 663 Fifth Avenue, New York, N. Y.
10022

Standardization and simplification activities of this Association are carried on by the Technical Committee which is charged with the duty of establishing standard grades and methods for testing animal glue products manufactured by its members. The following publications are available from the Association: "Animal Glue in Industry" and "Standard Methods for the Sampling and Testing of Animal Glues."

This Association, through its Technical Committee, has established a cooperative testing program in which its members and certain outside laboratories are invited to participate. The purpose of the testing program is to establish certain standards which will result in more uniform testing. This is achieved by the distribution of samples of animal glues to the member and non-member participating laboratories. The samples are subjected to a series of tests established by the Technical Committee and the results forwarded to the Association's headquarters where they are tabulated, identified by number only and sent to the Association's members as a specific report. Each participating member is informed of its identification number in the report and is therefore in a position to compare the results.

Through its members, the Association is represented on the Technical Association of the Pulp and Paper Industry, Gummed Industries Association, American Society for Testing and Materials, and Adhesives Manufacturers Association of America.

NATIONAL ASSOCIATION OF HOSIERY MANUFACTURERS,
Reuben C. Ball, President, 901 Johnston Building, Charlotte, N. C.
28202; 468 Park Avenue South, New York, N. Y. 10016

Several of the principal activities of the Association deal with matters relating to technical research and standardization, which include the development of standards for hosiery and methods for testing hosiery. Recent activities of this sort are: (1) Hosiery Lengths and Sizes, Commercial Standard CS46-49, currently under revision; (2) Minimum Standards of Measurement for Stretch Socks and Anklets, CS234-61; the above documents provide standard methods of measuring and minimum measurements for the hosiery, and were developed under the auspices of the Office of Commodity Standards (now Product Standards Section), National Bureau of Standards; (3) Standards of Inspection for Nylon Stockings for Women, which contains charts and photographs showing various types of yarn and manufacturing defects for use in inspecting and grading nylon stockings.

**NATIONAL ASSOCIATION OF IMPORTERS AND EXPORTERS
OF HIDES AND SKINS,** Manfred M. Peisak, Executive Secretary,
120 Liberty Street, New York, N. Y. 10006

This Association was incorporated in New York in 1918 to cooperate with the Federal Government in matters affecting the hide and skin trade, to promote the mutual interests of those

engaged in it, to develop cooperation with the tanning industry, and to act in conjunction with other organizations on matters of general trade interest.

Through its Standards Committee, the Association has established and published Standard Practices Governing the Export of U.S.A. Packer Hides, which are periodically revised to reflect new developments, usages and techniques in this field.

NATIONAL ASSOCIATION OF MOTOR BUS OWNERS, James D. Mann, Secretary-Manager, 839 17th Street, N.W., Washington, D. C. 20006

This Association, founded in 1926, works with representatives of the Interstate Commerce Commission and other interested agencies on problems of motor carrier safety, including, but not restricted to, such matters as brakes, tires, lights, windows, and emergency exits.

The Association actively participated in the development of USA Standard D15 USA Standard Method of Recording and Measuring Motor Fleet and Passenger Accident Experience, and is represented on the corresponding Interpretations Committee. The Association is also represented on USASI Sectional Committees which deal with Standards Z26 Safety Glazing Materials and D7 Inspection Requirements for Motor Vehicles, as well as the Highway Traffic Standards Board.

NATIONAL ASSOCIATION OF PLASTIC FABRICATORS, Arthur J. Tuscany, Jr., Executive Director, Standard Building, Cleveland, Ohio 44113

This Association, founded in 1956, is composed of suppliers of materials and equipment, and producers of finished products of decorative plastic laminate used for residential and commercial uses. The Association has published Quality Specifications QS 1-1965 which detail the manufacturing requirements for counter tops, work surfaces, wall paneling, partitions, and cabinet doors made of decorative plastic laminate. NAPF is expanding its quality specifications to include other products in the industry.

NATIONAL ASSOCIATION OF PLUMBING-HEATING-COOLING CONTRACTORS, Lawrence P. Mutter, Executive Director, 1016 20th Street, N.W., Washington, D. C. 20036

This Association was founded in 1883 to advance sanitation, encourage sanitary laws, and improve plumbing appliances and plumbing work. The Association participates in United States of America Standards Institute activities in the plumbing field, being a sponsor of the committee developing a National Plumbing Code (USA A40.8) and being heavily represented on Committee A112 which is studying plumbing materials standards. The Association also has members working with the Product Standards Section of the U. S. Department of Commerce, on material standards for products used in plumbing, heating, and cooling.

The Association has, from time-to-time, sponsored research to study particular plumbing subjects to further the development of soundly based standards. It is currently attempting to achieve standardization in the nomenclature used in control wiring for combustion equipment and central air conditioning equipment.

Various standardization activities of a specialized nature are carried on, e.g., working with the American Gas Association on relief valve standards, and with the Copper Development Association on copper pipe standard requirements for the Federal Housing Administration.

NATIONAL ASSOCIATION OF PURCHASING AGENTS, G. W. H. Ahl, Executive Vice President, 11 Park Place, New York, N. Y. 10007

This Association has affiliated with it more than 100 local purchasing associations in this country, and represents approximately 16,500 purchasing officials, both public and private. Representing a body of corporate consumers, including purchasing agents of industrial concerns, private and public utilities, and governmental and institutional buyers, this Association takes an active part in standardization and simplification programs of value to its members.

Realizing the importance of standards, an N.A.P.A. committee has been created, with 1 national chairman, 2 national vice chairmen, 9 district chairmen and 100 local association chairmen. These men are constantly promoting programs on standardization in the local Association monthly meetings for the benefit of members.

A few of the early efforts of this Association in standardization have been in connection with the preparation of the standard coal contract form in cooperation with the National Coal Association; and the formulation of standard forms of contract for erected and nonerected conveyor equipment in collaboration with the Conveyor Equipment Manufacturers Association.

The Iron and Steel Committee of this Association developed a standard code for marking steel bars, which was adopted by both the Federal Standard Stock Catalogue Board and the Navy Department. This committee also assisted in the development of a standard sales agreement and trade customs for the gray-iron foundry industry.

The Paper Shipping-Containers Buyers Group took an active part in the formulation of specifications for solid fibre containers and for corrugated containers, while the development of standard listings of industrial cotton constructions was made by the Cotton Fabrics Committee.

This Association's Electrical Contract Committee cooperated with several national electrical organizations in the proposed development of standard electrical contract forms for the purchase of electrical machinery.

The Association participates in the activities of the American Lumber Standards Committee in the establishment of American Lumber Standards on grading rules for softwood lumber.

Through its own initiative, this Association undertook a sim-

plication program for the reduction of catalogue sizes. This resulted in the adoption of the national standard sizes for catalogues. The Governmental Purchasers Group and the Institutional Buyers Group participated in standardization and simplification programs, either sponsored by or conducted under the auspices of technical organizations or agencies of the Federal Government.

This Association initiated simplification programs in cooperation with the National Bureau of Standards which led to the formulation of several Simplified Practice Recommendations. Specifically, there were established and published by the Bureau Simplified Practice Recommendations R37-38 covering standard sizes of commercial forms (invoice, purchase order, and inquiry) ; Recommendation R58-36 relating to classification of iron and steel scrap; and revision of Recommendation R166-37 with reference to color code for marking steel bars.

The Association is a Member Body of the United States of America Standards Institute. It also maintains representation on technical committees of the American Society for Testing and Materials.

The N.A.P.A. Professional Development Committee has sponsored an educational program which, although it does not come strictly within the purview of standardization proper, does cover subjects which are either directly or indirectly related to the broad field of standardization and simplification. In an effort to advance further sound principles of purchasing and to elevate the purchasing profession, this committee's professional development program includes, among other things, the publication of a series of handbooks for the guidance and use of the entire membership of the Association. The work of this committee has thus far resulted in the publication of handbooks entitled "Commodity Data Sheets," "Purchasing Policies and Procedures," "Industrial Purchasing—Principles and Practices," and "Materials Handbook." It is currently working on a "Guide to Purchasing."

NATIONAL ASSOCIATION OF RELAY MANUFACTURERS,
James V. Roughan, Executive Director, P. O. Box 7765, Phoenix,
Arizona 85011

The purpose of this Association is to promote the standardization of terminology and test procedures in the manufacture and use of relays. To implement this purpose, the Association has standing committees which coordinate the activities of NARM members with relay users and Governmental agencies in establishing specifications for relays. Specifications published to date include Recommended Specifications for High Reliability Relays, Reliability Guidelines for Relays, and NARM Relay Testing Procedures. NARM is also sponsoring the publication of a Relay Handbook soon to be published. In April of each year NARM cosponsors a National Relay Conference at Oklahoma State University. The purpose is to provide engineers and specialists concerned with relays the opportunity to present results of their technical investigations to representatives of prominent relay manufacturers and users and to those persons affiliated with institutions of higher learning who are interested in this area.

NATIONAL ASSOCIATION OF SHEET METAL DISTRIBUTORS, Thomas A. Fernley, Jr., Executive Secretary, 1900 Arch Street, Philadelphia, Pennsylvania 19103

This organization of wholesale distributors has cooperated with other units of industry in the establishment of Simplified Practice Recommendations covering standard sizes and varieties of sheet steel, terneplate, and eaves trough and conductor pipe, which were published by the National Bureau of Standards. It initiated the movements which resulted in the formulation of Simplified Practice Recommendations for the projects enumerated above.

NATIONAL ASSOCIATION OF STATE PURCHASING OFFICIALS, Charles A. Byrley, Secretary, 1313 East 60th Street, Chicago, Illinois 60637

For a number of years this Association has had a special standing committee which has dealt with the development of standards and specifications in various commodity areas. For example, this committee, officially known as the Committee on Standards, has worked closely with the U. S. Department of Agriculture in developing uniform meat and meat product specifications for State use. Although this has perhaps been the committee's greatest effort, it has also developed specifications covering such items as coffee, disinfectants (germicidal detergent and nondetergent), seafood, fruits (dehydrated, low moisture), fruit powders (dehydrated), fruits, juices, and vegetables.

The "Index of State Specifications on Commodities," undertaken by the Standards Committee of this Association, presents current specification usages in all States that have reported to the committee. This Index serves as a guide to State purchasing officials who wish to gauge the extent to which national accepted specifications (e.g. Federal Supply Service, U.S.D.A., U.S.D.I., etc.) for selected commodities are used successfully by a number of the States. Moreover, it identifies commodities for which individual States have prepared and promulgated their own specifications. And as a most significant service to State purchasing officials, the Index provides the necessary information to enhance an exchange of specifications between States.

NATIONAL ASSOCIATION OF WIPING CLOTH MANUFACTURERS, E. D. Szold, Secretary, 173 West Madison Street, Chicago, Illinois 60602

This Association was established in April 1932 and contains 111 members. This organization has adopted specifications for the sale of wiping cloths which cover process of sterilization and grading. In addition, it also has adopted an official label, the presence of which on a bale or carton of industrial wipers represents a guarantee that the contents of the bale or carton conform to the specifications. The wording of the label reads as follows: "The wiping cloths contained in this bale or package have been produced and packed according to specifications of the National

Association of Wiping Cloth Manufacturers." Each member of the Association issues an affidavit certifying that he, as a manufacturer of the particular bale or package of wiping cloths, has complied with all rules and regulations of the State and city health departments. The manufacturer also certifies that the wipers contained in a given shipment are correct in weight, and that he has complied with all of the recommendations promulgated by the National Association of Wiping Cloth Manufacturers.

Concerning enforcement of specifications, label, and affidavit, the Association relies chiefly upon the integrity of its members, each of whom pledges himself to comply with Association standards in the sale of any bale or carton of wiping cloths carrying or accompanied by the Association label or affidavit. A Complaints Committee investigates any alleged failure to conform. Violation of the pledge is punishable by expulsion from the Association, with attendant loss of the privilege of using the Association label and affidavit. During recent years several committees of the Association have cooperated with technical committees of the Navy Department and General Services Administration in preparation of specifications for purchase of wiping cloths for Federal agencies.

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS,
Edwin Wilkinson, President, 386 Park Avenue South, New York,
N. Y. 10016

The Association adopted standard definitions for clean wool, shrinkage, content and condition. It cooperated with the U. S. Department of Agriculture in establishing standards for wool grades. In 1955, the Association, along with other groups, opposed proposed revision of existing visual U. S. Department of Agriculture standards for wool grades. In 1963, the Association joined other associations in opposing a new and different revision of existing visual U. S. Department of Agriculture standards for wool grades but offered full cooperation in developing changes to remedy deficiencies. It participated in ad hoc committee studies resulting, in 1964, in recommendations by the American Society for Testing and Materials to the Department of Agriculture in respect to the proposed revisions.

It cooperated with the Department of Agriculture in establishing standards for wool top grades. Through its Wool Top Committee, the Association supervised a project undertaken by the Textile Foundation to settle the question of top standardization and to develop some basic means for measuring fineness. As a result of this work, the Association presented to the industry a schedule of fineness measurements for the qualities of 80's to 50's inclusive, which were generally accepted by the trade. These standards formed the basis for new wool-top standards which were promulgated by the Secretary of Agriculture in 1939.

The Association formulated, through its Committee on Olive Oil Alternatives, specifications for mineral-oil-coconut-oil blend as an alternative for olive oil, as set forth in the Annual Bulletin of the Association for 1941, Pt. III, p. 495. To meet war-caused shortage of coconut oil, it recommended specifications for substitute blend of equal parts of mineral oil with lard or grease oil.

In 1942, in response to a request from Wool Associates of the

New York Cotton Exchange, it made recommendations on standards of tests or methods of procedure which would have the effect of broadening the type of lubricants which could be employed in combing wool top for delivery to the Exchange.

It cooperated with the National Bureau of Standards in the establishment and revision of Simplified Practice Recommendation R11-36 relating to bed blanket sizes; it also took active part in preparation of Commercial Standard CS39-37 for wool and part-wool blankets. In addition, the Association initiated a movement resulting in the establishment of Commercial Standard CS65-38 for wool and part-wool fabrics.

The Association approved sales contract provisions for Worsted Commission Combing, Top-making, Worsted Yarn, and Woolen and Worsted Piece Goods.

Representation is maintained on Technical Committee D-13 of the American Society for Testing and Materials, which has been continuously engaged in developing standards and methods of test for textile materials.

**NATIONAL AUDIO-VISUAL ASSOCIATION, James P. Thompson,
General Manager, 3150 Spring Street, Fairfax, Virginia 22030**

This Association, founded in 1940, consists of dealers, manufacturers, producers, and suppliers of audio-visual products and materials such as movie projectors, film, and tape recorders.

When the filmstrip (or slide film), with or without accompanying sound, became an important media of communication, it was imperative that the arrangement of the filmstrip be standardized so that all confusion would be eliminated in the actual utilization of the media. To this end, the Association prepared Standard Specifications for 35mm Single Frame Filmstrips, which are utilized throughout industry and commerce.

NAVA's Standards Committee seeks and coordinates the standardization requirements of various consumer groups, which are then turned over to manufacturers. As a result of a survey among dealers and some consumers, manufacturers have been urged to standardize on the selection of plugs and connectors, and to use "captive" power cables to avoid loss and confusion. Projector manufacturers have been urged to limit the number of lamp types in new equipment, and 16mm projector manufacturers are currently considering the sale of projectors to dealers without a lens, leaving the customer free to select the specific type and focal length required. Educational users have strongly recommended that silent speed be eliminated to reduce cost and service problems.

The committee cooperates with the United States of America Standards Institute and other groups interested in standardization in its field.

**NATIONAL AUTOMATIC MERCHANDISING ASSOCIATION,
David E. Hartley, Public Health Counsel, 7 South Dearborn Street,
Chicago, Illinois 60603**

This is the national trade association representing merchandise vending machine manufacturers, product and parts suppliers and vending operators.

In July 1957, the U. S. Public Health Service published the

Recommended Ordinance and Code "The Vending of Foods and Beverages," which was developed in cooperation with NAMA. In 1957, NAMA organized an Automatic Merchandising Health-Industry Council to offer guidance to the industry's public health programs, including those of machine standardization and evaluation-approval. The Council includes industry, national health organization representatives and members of the Armed Forces and the Public Health Service.

NAMA has established research grants and consultant arrangements with public health schools at Michigan State and Indiana Universities. Vending machine evaluations against the design and construction requirements of the PHS Code and a Vending Machine Evaluation Manual developed by the Health-Industry Council are carried out at both universities.

Vending machines from NAMA member and nonmember manufacturers are examined and, if in compliance, awarded a Letter of Compliance by the evaluating university agency. Checklists, procedural forms, the Evaluation Manual and other administrative program details used by NAMA are those recommended by the Health-Industry Council.

An independent standardization endeavor of NAMA concerns safety standards for vending machines and machine operation. NAMA's Safety Standards and Education Committee has developed a special standard for water heaters in hot beverage machines which is entitled "NAMA Water Heater Safety Manual." Further standards for the use of CO₂ compressed gas cylinders in vending machines are currently under development.

NAMA publishes annual Listings of all vending machines which have been evaluated and certified under the Machine Evaluation Program. Applicants may receive the Listing of Letters of Compliance and be placed on the future mailing list, both free of charge.

NATIONAL AUTOMATIC SPRINKLER AND FIRE CONTROL ASSOCIATION, Robert R. Coster, President, 277 Park Avenue, New York, N. Y. 10017

The primary objective of this Association is the advancement of the art of automatic control of fire through automatic sprinklers, and the conservation of life and property from fire. This organization is a national trade association of automatic sprinkler manufacturers and installers. It was founded in 1914.

The Association cooperates with national technical bodies in the preparation of standards and fire protection sections of building codes and ordinances. It has 64 representatives on 54 important National Fire Protection Association committees. These committees set standards for design, installation, inspection, and maintenance of automatic sprinklers. The Association cooperates in the design, installation and maintenance of standpipes and hose systems and of private underground systems supplying water for fire extinguishment, including the character and adequacy of water supplies and the selection, installation, and maintenance of valves, hydrants, monitor nozzles, hose and accessory equipments, as well as the supervision of valves controlling water supply for fire protection.

The Association concerns itself with the design and construction of hose houses and fire department procedure in fighting fires in buildings equipped with automatic sprinklers. In this respect, it publishes regular editions of a "News Bulletin" and an internal "Industry Bulletin." To further that end, the Association engages in a program of lectures to State fire schools and fire chiefs' associations.

It cooperates with the National Board of Fire Underwriters, Underwriters Laboratories, and Associated Factory Mutuals Laboratory relative to the formulation of standards, specifications and regulations for fire apparatus and its use.

The Association is officially represented on sectional committees functioning under the procedure of the United States of America Standards Institute engaged in the development and revision of the following subjects: Code for Pressure Piping, Pipe Threads, and Pipe Flanges and Fittings.

Its recently developed Fire Protection Section for Building Codes and a Suggested Ordinance for the Protection of Nursing Homes is gaining wider recognition by communities wishing to adopt safer legislation, particularly with regard to loss of life from fire.

NATIONAL AUTOMOBILE THEFT BUREAU, G. P. Herndon, Jr.,
Chairman, 100 William Street, New York, N. Y. 10038

This Bureau has a membership of over 350 insurance companies, both stock and nonstock in character, writing fire and theft insurance pertaining to the ownership, use and maintenance of motor vehicles. Membership is open to all insurance companies in good standing.

The Bureau was organized for the purpose of assembling and disseminating nationwide reports on automobiles reported stolen and insured by its members, and to assist law enforcement agencies in the identification and recovery of automobiles where ownership is in question.

This Bureau has been designated by the International Association of Chiefs of Police as its official clearinghouse on automobile theft information.

The Bureau cooperated with the Governors' Commission on Uniform State Laws in drafting a Uniform Motor Vehicle Certificate of Title and Antitheft Act which was approved and recommended for enactment in all States. It is cooperating with all automobile manufacturers in the adoption of a standard method of affixing, stamping and recording identification numbers at a uniform location on motor vehicles.

In addition to its automobile theft work, this Bureau also investigates suspicious automobile fires and distributes to law enforcement agencies a Manual for the Investigation of Automobile Fires.

NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS, E. O. Peterson, Executive Director, 1155 North High Street, Columbus, Ohio 43201

The Board, founded in 1919, confines its membership to persons charged with enforcement of the boiler and pressure vessel laws in the various States, municipalities in the United States over 500,000

population, and the Canadian provinces. The Board operates in the following areas of standardization: (a) Boiler and pressure vessel law enforcement; (b) uniform boiler laws and rules throughout the jurisdiction of its members; (c) uniform qualifications for boiler and pressure vessel inspectors, including identical examinations conducted simultaneously throughout the United States and Canada; (d) uniform stamping of boilers and pressure vessels that are inspected during construction by such boiler and pressure vessel inspectors who hold valid National Board commissions; and (e) uniform relieving capacity ratings of safety valves and pressure relief valves for boiler and unfired pressure vessel service.

All States, municipalities and Canadian provinces that have boiler and pressure vessel laws recognize the National Board inspector's commission and National Board stamping on boilers and pressure vessels as meeting their safety law requirements for new construction. Transfer of such objects between States is implemented by National Board stamping. Relieving capacities of safety valves and pressure relief valves as determined by the National Board of Boiler and Pressure Vessel Inspectors is used by the various State, municipal and provincial jurisdictions to determine adequate volumetric relief of the pressurized medium in event of runaway conditions.

NATIONAL BUILDERS' HARDWARE ASSOCIATION, William S. Haswell, Managing Director, 1290 Avenue of the Americas, New York, N. Y. 10019

This Association serves the interest of 385 builders' hardware distributors located in the United States and Canada. One of its active programs is the promotion of standardization of installation characteristics.

USA Standard A115.1-1961 for mounting dimensions of door locks and flush bolts, was sponsored by this group.

Literature published by the Association takes the form of handbooks listing selections of proper types and sizes of hardware for typical usage situations.

The Association also works closely with Government agencies in the preparation of Federal Specifications and preapproval of samples.

NATIONAL CANNERS ASSOCIATION, Milan D. Smith, Executive Vice President, 1133 20th Street, N. W., Washington, D. C. 20036

This organization maintains a Committee on Simplification of Containers which has cooperated with the National Bureau of Standards in the establishment of Simplified Practice Recommendation R155-49 covering names and dimensions of cans for fruits and vegetables. For the purpose of developing improvements in the metals, materials, and products used in the canning industry, this Association maintains research laboratories in Berkeley, California; Seattle, Washington; and Washington, D. C.

NATIONAL CARGO BUREAU, Jerome P. Scully, Secretary, 99 John Street, New York, N. Y. 10038

This Bureau is dedicated to the safe stowage, securing, and

unloading of cargo on all vessels, and the safety of shipboard cargo handling gear aboard vessels through the uniform application of a set of standards designed to protect cargo, vessel, personnel, and the public interest.

The roots of National Cargo Bureau go back over a century to the earliest days of the American merchant marine. Its growth in functions and services parallels the expansion of the role of the United States in the world's commerce on the seas.

The Bureau is a nonprofit, membership organization. Its membership is comprised mainly of persons who are prominently identified with steamship management or marine insurance underwriting organizations. The membership of the Board of Directors includes many of the leaders of the marine insurance and steamship companies, the Commandant of the U. S. Coast Guard and the Maritime Administrator.

To accomplish its purposes the National Cargo Bureau does the following: (1) After studies in cooperation with industry, shippers and Government agencies, prepares for U. S. Coast Guard approval recommendations and regulations on safe stowage of goods aboard ship; (2) participates with the United States Government in international efforts to achieve uniformity of safety standards and stowage regulations and to remove obstacles resulting from lack of uniformity; (3) serves as a central source of information on the thousands of commodities shipped by water; (4) makes available a low-cost cargo inspection service at the point of actual loading in all United States ports; (5) performs unusual cargo inspection and many and varied special surveys, such as deadweight surveys, heavy lifts, locomotives, etc.; and (6) offers its services as an agency for inspection and certification of shipboard cargo gear.

NATIONAL COMMISSION ON SAFETY EDUCATION,
NATIONAL EDUCATION ASSOCIATION, Norman Key, Executive Secretary, 1201 Sixteenth Street, N.W., Washington, D. C. 20036

Since 1945, the Commission has administered and published the report of six national conferences whose broad purpose was to update and strengthen the nationally recommended minimum standards for school bus chassis and bodies. The conferences have been cosponsored by the Commission, Council of Chief State School Officers, American Association of School Administrators, NEA Department of Rural Education, and the U. S. Office of Education. The central objectives of these conferences have been: (a) safety—all those factors relating to school bus construction which may directly or indirectly affect the safety and welfare of pupils transported; and (b) economy—the construction, procurement, operation, and maintenance of school buses of the lowest cost consistent with the safety and welfare of pupils.

Participants in these conferences are officials of State and local school systems and other State agencies responsible for the safety of school buses on the highway; engineers representing the manufacturers of school bus chassis, bodies, vehicle components and equipment items; and representatives of interested national organizations and governmental agencies.

Several States have adopted the nationally recommended minimum standards for school buses, and more than 40 States report that their state standards for school buses are of the same general pattern and extent.

NATIONAL COMMITTEE ON UNIFORM TRAFFIC LAWS AND ORDINANCES, Robert Montgomery, Jr., 1319 18th Street, N.W., Washington, D. C. 20036

This Committee has developed and published the Uniform Vehicle Code and the Model Traffic Ordinance, which are continually reviewed and periodically revised and republished. The Code is the recognized national standard for State legislation relating to motor vehicles and highway traffic. The Ordinance is recommended as the basis for legislation in this field by cities and counties. Both have been widely used as patterns or guides throughout the United States, as well as in Canada and other countries.

The Uniform Vehicle Code was first produced in 1926 by a committee of the National Conference on Street and Highway Safety in cooperation with the National Conference of Commissioners on Uniform State Laws. It reflected the need, which even then was clearly apparent, for uniformity in rules of the road and other laws regulating motor vehicles and their use.

The Code committee was reorganized and expanded in 1947 under the framework of the President's Highway Safety Conference. It consists of about 100 members, including highway, motor vehicle, and police officials; legislators, judges, prosecutors, educators; representatives of the automotive, transportation, and insurance industries; motor clubs, safety councils, and women's civic, legal engineering, business, and labor organizations. It is supported by public agencies and private groups interested in more uniform and effective motor vehicle and traffic laws.

NATIONAL COTTON COMPRESS AND COTTON WAREHOUSE ASSOCIATION, John H. Todd, Executive Vice President and General Counsel, 1085 Shrine Building, Memphis, Tennessee 38101

This Association, founded in 1937, has Special Committees on Bale Preparation, Insurance and Standards, and Research and Engineering. For a number of years, the Research and Engineering Committee worked closely with U. S. manufacturers of cotton bale ties and buckles, with a view to improving their quality, strength and reliability. The resulting standards, which have been widely used by manufacturers since 1956, cover width of ties, thickness of ties, minimum elongation of ties under stress, flatness of ties, weight and minimum tensile breaking strength of both ties and buckles.

NATIONAL COTTONSEED PRODUCTS ASSOCIATION, John F. Moloney, Secretary-Treasurer, 2400 Poplar Avenue, P. O. Box 12023, Memphis, Tennessee 38112

This Association maintains for members, trading rules which contain standards of quality, weight and measurement of all cottonseed products, and general terms and conditions applicable to

buyers and sellers who are Association members. In addition to defining product grade and quality, the Association's rules provide for adjustments, packaging, performance of contracts, weighing, sampling and inspection service, chemical analysis and arbitration of differences.

The Association has a chemists' committee, composed of qualified oil chemists, which must approve methods of chemical analysis before they are incorporated into the trading rules. A committee on seed grading cooperates with the U. S. Department of Agriculture in providing methods for the evaluations of cottonseed. The research committee regularly reviews research on cottonseed and cottonseed products and recommends lines of work for support by the Association; a research fellowship is maintained at the New Orleans Laboratory of the Agriculture Research Service and grants are made to several universities and other research agencies. The Association works with the Association of American Feed Control Officials to standardize regulations governing the labeling and marketing of cottonseed cake and meal.

NATIONAL COUNCIL ON RADIATION PROTECTION AND MEASUREMENTS, Lauriston S. Taylor, President, 4000 Brandywine Street, N.W., Suite 604, Washington, D. C. 20016

The National Council on Radiation Protection and Measurements established in 1929, is a private, nonprofit, nongovernment organization operating under a Federal Charter granted in 1964. Its primary efforts are in the field of ionizing radiation protection philosophy and standards, and in the broad area of measurements of ionizing radiation for medical and industrial purposes. It has been largely responsible for the development of all basic radiation protection standards used in the U. S. since 1930.

It currently has twenty-one (21) scientific committees as follows: Basic Radiation Protection Criteria; Permissible Internal Dose; X-Rays Up to Three Million Volts; Heavy Particles (Neutrons, Protons, and Heavier); Electrons, Gamma Rays and X-Rays Above Two Million Volts; Safe Handling of Radioactive Materials; Monitoring Methods and Instruments; Waste Disposal and Decontamination; Protection Against Radiations from Ra, Co⁶⁰, and Cs¹³⁷ Encapsulated Sources; Regulation of Radiation Exposure Dose; Incineration of Radioactive Waste; Electron Protection; Safe Handling of Bodies Containing Radioactive Isotopes; Permissible Exposure Doses Under Emergency Conditions; Radiation Protection in Teaching Institutions; X-Ray Protection in Dental Offices; Veterinary X-Ray Protection; Standards and Measurement of Radioactivity for Radiological Use; Standards and Measurement of Radiological Exposure Dose; Standards and Measurement of Absorbed Radiation Dose; Relative Biological Effectiveness.

Thirty reports have been issued by various of the committees listed above; eight are in process.

NATIONAL CRUSHED STONE ASSOCIATION, J. E. Gray, Engineering Director, 1415 Elliot Place, N.W., Washington, D. C. 20007

This Association cooperates with national technical organizations in standardizing specifications, methods of test, and recom-

mended practices involving the use of crushed stone. It is represented on technical committees of the American Society for Testing and Materials dealing with concrete and concrete aggregates, road and paving materials, and mortars for unit masonry. Also, the Association actively participates in the technical committee work primarily concerned with the development of recommended practices of the American Concrete Institute, the American Railway Engineering Association, and the Highway Research Board of the National Research Council.

Through a joint committee composed of representatives of the National Sand and Gravel Association, the National Slag Association, and this Association, a simplification program was initiated under the auspices of the National Bureau of Standards which resulted in the establishment of Simplified Practice Recommendations R147-33 on wire diameters for mineral aggregate production screens and R163-48 on coarse aggregate (crushed stone, gravel, and slag) sizes. In continuation of the cooperative effort of the three mineral aggregates associations, a Joint Technical Committee of representatives of these associations has been formed for the purpose of coordinating and combining the technical work on problems of mutual interest.

NATIONAL DISTRICT HEATING ASSOCIATION, Roberta S. Hauser, Secretary-Treasurer, 710 Highland Building, Pittsburgh, Pennsylvania 15206

This Association is engaged in furnishing technical information to its members to improve the methods of generating, distributing, and utilizing steam in district heating. It has organized a dozen committees dealing with air conditioning, commercial relations, distribution, education, metering, rates and regulations, research, sales development, statistics, steam station and university heating and utilities. These committees cooperate with similar committees of other organizations, notably the National Association of Building Owners and Managers, the American Society of Heating, Refrigerating and Air-Conditioning Engineers, the American Society of Mechanical Engineers, and the United States of America Standards Institute.

Several years ago this Association published a handbook which provides an authoritative and complete manual of practice for the use of those actively engaged in district heating work.

The Association is officially represented on the United States of America Standards Institute's code for pressure piping.

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, Joseph F. Miller, Managing Director; L. D. Price, Manager, Engineering and Safety Regulations Department, 155 East 44th Street, New York, N. Y. 10017

This is a trade association of manufacturers of almost every kind of equipment and apparatus used for the generation, transmission, distribution and utilization of electric power. The membership of NEMA comprises over 500 of the major electrical manufacturing companies in the country. The membership is

limited by its constitution to corporations, firms and individuals actively engaged in the manufacture for sale in the open market of products included within the product scope of one or more of the 80 NEMA product subdivisions. It may therefore be considered an aggregation of product Sections, each representing a group of manufacturers of certain classes of products, such as motors and generators, steam and hydraulic turbines, transformers, wire and cable, switchgear, industrial control, ranges, water heaters and household appliances. Sections with related interests are organized into 8 Divisions.

NEMA has published over 200 separate standards publications for electrical apparatus and equipment in the following classifications: appliances, illuminating equipment, signalling and communication equipment, industrial apparatus, building equipment and supplies, insulating materials, insulated wire and cable, generation, transmission and distribution equipment.

A considerable amount of NEMA standardization activity is in cooperation with other organizations engaged in standardization. Standards of interest to NEMA are developed in cooperation with other industries or other branches of the electrical industry, through such agencies as the American Society for Testing and Materials, Edison Electric Institute, National Fire Protection Association, Underwriters' Laboratories, the Institute of Electrical and Electronics Engineers, and other associations, laboratories or governmental bodies.

Many electrical products standards originating within NEMA or initiated by other organizations are of such national significance as to make desirable their adoption as USA Standards under the procedure established by the United States of America Standards Institute, which provides participation by and consideration of the views of all interested groups. NEMA supports USASI through participation in its standardizing activities. It has representation on many Sectional Committees and sponsors several of them. In addition, it is represented on several USASI Standards Boards and the Standards Council.

NEMA participates in the International Electrotechnical Commission (IEC)—the international body for the development and approval of recommendations for electrical standards—by means of representation on the U. S. National Committee of the IEC, by its representatives on the USASI Sectional Committees which act as advisory groups to the U. S. National Committee on the technical provisions of IEC proposals, and by the presence of its representatives at meetings of IEC Technical Committees. Through the U. S. National Committee on Participation in CEE, NEMA provides an observer to the International Commission on Rules for the Approval of Electrical Equipment (CEE), a European safety organization.

In addition to products standards, NEMA is vitally concerned with and participates in the development of safety standards affecting electrical equipment. There are two principal codes dealing with electrical safety: the National Electrical Code (USA Standard C1) developed by the National Fire Protection Association and dealing with installations in and around buildings, and the National Electrical Safety Code (USA Standard C2) spon-

sored by the National Bureau of Standards and dealing with power houses, substations, overhead and underground lines. NEMA cooperates with other branches of the industry in an effort to secure acceptance throughout the country of nationally recognized standards for safe construction and installation. Its members also cooperate in an advisory capacity with the Underwriters' Laboratories in the development of standards for electrical safety.

NEMA, upon invitation, furnishes the military and other governmental standardizing bodies information and recommendations for use in the preparation of their initial drafts or revisions of various Federal and Military Specifications affecting products within its scope.

NATIONAL ELEVATOR MANUFACTURING INDUSTRY, Emile Keltner, Secretary, 101 Park Avenue, New York, N. Y. 10017

Two committees of this organization are concerned with the development of standards, specifications and codes. The Standards Committee has developed initial engineering standards for the industry. Its work has resulted in the formulation of Standard Layouts which give car sizes and hatchway dimensions for various types of elevators; Standard Specifications covering complete installation of passenger and freight elevators with various types of operation and control; and Standard Forms which provide outlines of suggested forms of contract covering various phases of elevator work.

The Central Code Committee is concerned with the development, interpretation, revision and adoption of all safety codes for elevators, dumbwaiters and escalators. This Committee, working through regional subcommittees throughout the country, has taken an active part in securing the adoption of new State and City Elevator Codes, the revision of existing codes, and securing uniform interpretations of codes conforming to the United States of America Standards Institute A17.1 USA Standard Safety Code for Elevators. Working in conjunction with the ASA (now USASI) A17 Sectional Committee, NEMI assisted in the development and subsequent revision of ASA A17.1 American Standard Safety Code for Elevators, Dumbwaiters and Escalators and its publication by the American Society of Mechanical Engineers in 1925 as an American Standard, and of the ASA A17.2 American Standard Practice for the Inspection of Elevators first approved by ASA and published by ASME in 1945.

The latest revision of the A17.1 Code was approved by ASA and published by ASME in 1960, together with a supplement listing a number of revisions approved and published in 1963.

NATIONAL FIBRE CAN AND TUBE ASSOCIATION, William E. Hughes, Managing Director, 1725 Eye Street, N.W., Washington, D. C. 20006

This Association develops standard testing procedures for the purpose of providing manufacturers and users with uniform methods to measure and test the physical characteristics of fibre cans,

tubes and cores. There are presently 14 NFCTA standard testing procedures covering measurement of wall thicknesses, inside diameters, outside diameters, lengths and heights, moisture content, loose metal end dimensions, and end seam dimensions; axial (end-to-end) compression; side-to-side crush; end blow-off pressure; internal bursting; end-supported beam strength; torque strength; and dimensional stability.

NATIONAL FIRE PROTECTION ASSOCIATION, Percy Bugbee, General Manager; George H. Tryon, Technical Secretary, 60 Battery-march Street, Boston, Massachusetts 02110

This Association is a nonprofit, technical and educational organization to promote the science and improve the methods of fire protection. Its membership includes 200 national and regional organizations, and approximately 21,000 individuals, firms, and corporations.

One of the main functions of NFPA is in the standards making field under which codes, standards, and recommended practices are developed as guides to engineered protection for reducing loss of life and property by fire. The other principal function is to educate the public in fire prevention to reduce man-caused fires.

The standards activity is handled by 122 committees and sectional committees whose membership comprises approximately 1,400 individuals representing qualified international, national, and regional organizations, NFPA sections or technical committees, and individuals especially qualified to serve on the basis of their personal knowledge of the subjects. In addition, committees may have liaison or advisory members, and corresponding members, the latter group being composed chiefly of individuals who live outside the North American continent who are in a position to assist in the committee work only through correspondence.

Fire safety has broad applications and the standards formulated and adopted by the Association cover a wide range of subjects. The standards are combined and published yearly as National Fire Codes, the volumes of which are identified as follows: Volume 1, Flammable Liquids; Volume 2, Gases; Volume 3, Combustible Solids, Dusts and Explosives; Volume 4, Building Construction and Facilities; Volume 5, Electrical (including the National Electrical Code); Volume 6, Sprinklers, Fire Pumps and Water Tanks; Volume 7, Alarms and Special Extinguishing Systems; Volume 8, Portable and Manual Fire Control Equipment; Volume 9, Occupancy Standards and Process Hazards; Volume 10, Transportation. The total number of standards published in these volumes is 190. The total number of pages in the National Fire Codes (in their most recent editions) is 6,600 pages.

A number of the standards issued by NFPA are subsequently submitted to and approved by the United States of America Standards Institute. Typical of these standards are the National Electrical Code, Lightning Protection Code (cosponsored with the Institute of Electrical and Electronics Engineers), a series of Codes on Dust Explosion Hazards, and standards for the Installation of Gas Appliances and Gas Piping (cosponsored with the American Gas Association), Installation of Oil Burning Equip-

ment, Installation of Portable Fire Extinguishers, Carbon Dioxide Extinguishing Systems, and a standard on Places of Outdoor Assembly (Grandstands and Tents).

NATIONAL FLAXSEED PROCESSORS ASSOCIATION, George L. Prichard, Executive Secretary, 1017 National Press Building, Washington, D. C. 20004

This Association, consisting of flaxseed processors producing linseed oil and meal, contributes to the development of national standards for flaxseed and flaxseed products. The Association itself, and through its members, cooperates in the development of test methods and specifications which are ultimately approved and issued by government agencies and organizations such as the American Society for Testing and Materials and the American Oil Chemists' Society. Publications to date include Trading Rules Governing Purchase and Sale of Linseed Oil and Linseed Meal.

NATIONAL FLUID POWER ASSOCIATION, Theodore Pearce, Executive Vice President, P. O. Box 49, Thiensville, Wisconsin 53092

This Association develops and sponsors standards for the fluid power industry in the U. S. It is also sponsor of United States of America Standards Institute Sectional Committee B93, Fluid Power Systems and Components, through which NFPA Recommended Standards are processed to become USA Standards. In addition, the Association is a member of eight other USASI sectional committees which have a strong related interest in fluid power, and a U. S. representative on ISO TC-10/SC-2 (Fluid Power Symbols).

There are 28 specific project areas in which NFPA standards have been developed or are in process. They include standards for fluid power cylinders, valves, pumps, motors, sealing materials, conductors, fittings, filters, fluids, servovalves, accumulators, and fluid amplifiers. The standards cover dimensions, specifications, tests and ratings, terminology, symbols, and procedures.

NATIONAL FOREST PRODUCTS ASSOCIATION, Mortimer B. Doyle, Executive Vice President, 1619 Massachusetts Avenue, N.W., Washington D. C. 20036

The national Association represents affiliated associations which include the American Walnut Manufacturers Association, American Wood Preservers Institute, Appalachian Hardwood Manufacturers, Inc., California Redwood Association, Fine Hardwoods Association, Hardwood Dimension Manufacturers Association, Hardwood Plywood Manufacturers Association, Maple Flooring Manufacturers Association, National Oak Flooring Manufacturers Association, Northeastern Lumber Manufacturers Association, Inc., Northern Hardwood and Pine Manufacturers Association, Red Cedar Shingle and Handsplit Shake Bureau, Southern Cypress Manufacturers Association, Southern Hardwood Lumber Manufacturers Association, Western Wood Products Association, and Canadian Wood Council.

This Association prepares and distributes various standards for the use of lumber and wood products. Among these are the National Design Specification for Stress-Grade Lumber and Its Fastenings, Wood Structural Design Data Booklet, Maximum Spans for Joists and Rafters in Residential Construction, Wood Construction Data series and many other technical publications. During the past three years, the national Association has developed and is promulgating a modular system of construction for use in the light frame construction field which is called its UNICOM system. This design standard is intended to facilitate the economic and efficient use of lumber and components used for housing and light industrial building. The various regional and species associations prepare and publish grading rules adapted to their respective species which are then used for the grading of lumber. The Association is currently engaged in the development of lumber standards with various committees of the United States of America Standards Institute and American Society for Testing and Materials, including those which developed standard methods for fire endurance tests, for building construction and methods for testing building construction.

NATIONAL FORMULARY, Dr. Edward G. Feldman, Director of Revision, 2215 Constitution Avenue, N.W., Washington, D. C. 20037

The National Formulary (N.F.) is a book of drug standards which since 1906 has been recognized as an official drug compendium in the Federal Food and Drug Law, as well as the drug laws of the individual States. As such, the standards prescribed therein are subject to enforcement by Federal and State drug officials (i.e., the Food and Drug Administration).

Furthermore, the law provides that not only must the N.F. tolerances or specifications be met, but that the assays or manner of determining those standards must be according to the procedures which are detailed for them in the N.F.

The individual monographs in the N.F. include standardized drug nomenclature and standards and tests for the identity, purity, and strength of drugs, pharmaceutical chemicals, and dosage forms of drugs. The N.F. has long been a leader in the efforts to utilize the metric system to standardize weights and measures in the United States. The metric system was introduced into the 2nd edition of the N.F. in 1896, and since 1960 all units of weights and measures in the N.F. have been given only in the metric system.

Many of the N.F. test or assay procedures require the use of a special reference substance. For this purpose, the N.F. makes available collaboratively tested materials known as N.F. Reference Standards. A total of 96 such standard substances are presently available in this program which is operated on a self-sustaining basis.

The N.F., along with the United States Pharmacopeia, and the American Medical Association, through its membership on the USAN (United States Adopted Names) Council contributes to the standardization of nonproprietary nomenclature for new drugs.

The National Formulary has been revised on a regular basis

since 1888, and new editions are now issued at 5-year intervals, with supplements being issued at periodic intervals between revisions. The currently official N.F. was published in January 1965, and became effective September 1, 1965. The National Formulary and its revision program are sponsored by the American Pharmaceutical Association.

NATIONAL HARDWOOD LUMBER ASSOCIATION, M. B. Pendleton, Secretary-Treasurer, Suite 2408, 59 East Van Buren Street, Chicago, Illinois 60605

One of the principal functions of this organization for the past 61 years has been the maintenance of standards for the grading of hardwood lumber, and an inspection staff for the official application of the standards.

This Association issues biennially a new edition of the rules for the measurement and inspection of hardwood lumber, cypress, and thin lumber.

The Association maintains qualified inspectors in the principal hardwood markets and producing districts of the United States and Canada who are authorized to issue certificates of inspection of hardwood lumber and cypress, the correctness of the grades and measurements shown on the certificate being guaranteed by the financial resources of the Association. This official inspection service is available to the members and nonmembers on government contracts, including Federal, State or local. Extensive use of this service is also being made by the U. S. Defense Supply Agency.

A full-time school is maintained in Memphis, Tennessee, by the Association for the training of men to be proficient hardwood inspectors. The course of five months is open to members and nonmembers and their employees up to 50 in number.

In cooperation with the National Bureau of Standards, this Association was instrumental in bringing about the establishment of a Commercial Standard for solid hardwood wall paneling. This resulted in the formulation and publication by the U. S. Department of Commerce of Commercial Standard CS74-39 providing two classes of wall paneling.

NATIONAL INDUSTRIAL LEATHER ASSOCIATION, E. R. Rath, Executive Vice President, P. O. Box 1485, Pompano Beach, Florida 33061

The Association, through its Engineering and Technical Committees representing its different Divisions, has developed dimensional standards covering leather belting, mechanical leather packings, certain textile leathers, etc. These same committees have also prepared standard procedures for testing such physical characteristics of various industrial leather products as the bond strength of cement used in the fabrication of leather belting, porosity of leather packings, etc.

Through the work of the Association, horsepower rating tables and correction factors have been developed for flat leather belting, which have been adopted by the entire industry. The Association

and its committees have cooperated with the National Bureau of Standards in the preparation of Federal Specifications covering various industrial leather products. It has also worked very closely with United States of America Standards Institute Sectional Committee B93 in the development of recommended practices pertaining to sealing devices.

NATIONAL INSTITUTE OF DIAPER SERVICES, Mrs. Ruth P. Schaumann, Executive Director, 67 West 44th Street, New York, N. Y. 10036

The Institute was founded in 1938 to conduct research into the requirements of diaper processing to make it safe for infant skin. An independent accredited medical laboratory under the supervision of a clinical pathologist conducted microbiological and patch test studies on infants in order to establish standards. The laboratory then devised testing procedures by which random sample diapers can be tested routinely against the prescribed standards. A diaper service must meet these standards consistently in order to display the Diaseptic Process^R Symbol.

Standards are raised from time-to-time as new knowledge is revealed by the continuing research program. The diaper test now includes five major areas: (1) A sanitary score, awarded on the basis of microorganisms found on the sample, either by direct plating or by subculture. If any pathogenic organisms are found, the sample is not acceptable. Nonpathogenic organisms are permissible only up to 125 colonies; (2) a pH test by the colorimetric procedure, to show that the sample meets the acceptable range of 4.5 to 6.5; (3) a zone of inhibition test by agar plate against staphylococcus aureus (USDA 209) after 24-hour incubation, made in comparison with previously established standards according to the kind of antiseptic used in the diaper processing; (4) a softness test with freedom from stiffness or pilling; and (5) an absorbency test so that water added drop by drop enters the fabric immediately.

Standards are now being developed for plant sanitation, customer service, and marketing practices. Accreditation to display the Diaseptic Process^R Symbol will be offered to diaper services that can meet all established standards.

NATIONAL INSTITUTE OF DRYCLEANING, (formerly National Association of Dyers and Cleaners), George P. Fulton, General Manager, 909 Burlington Avenue, Silver Spring, Maryland 20910

This Institute cooperated with the National Bureau of Standards and solvent producers in the establishment of U. S. Commercial Standard CS3-40 for Stoddard Solvent and CS174-51 for 140-F Solvent. Both are petroleum fractions. The Institute developed its own quality standard for perchlorethylene (tetrachloroethylene), a chlorinated hydrocarbon, which is widely accepted.

The Institute maintains research laboratories and educational facilities at its headquarters in Silver Spring, Maryland, a branch laboratory for textile damage evaluation services in Glendale, Cali-

fornia, and a textile trade relations office in New York City. The results of its investigations of fundamental problems of the dry-cleaning process and with textile products are published in bulletin form. Fellowship testing services are offered suppliers of textile products, drycleaning supplies, and machinery. Routine testing services are also rendered on textiles, solvents, detergents, water repellents, moth repellents, spot removal agents, etc. Various artificially soiled fabrics are sold for use in evaluation of drycleaning processes and a cleaning performance test service is offered.

Textbooks on drycleaning practice, spot and stain removal, applied science, and finishing for use in its comprehensive range of resident and correspondence courses have been published. Periodical issues of bulletins supply technical information on drycleaning and textiles to drycleaners, and Institute fabric behavior and care information is sent regularly to a large readership in the fields of education and homemaking. Notable other reference works include "Focus on Fabrics," a compendium of fabric information in relation to drycleaning, and the National Fair Claims Guide for Consumer Textile Products, a standard for use in judging responsibility for damage claims and for calculation of adjustment values. Standards for pressing and finishing coats, trousers, and other garments have also been published.

The Institute has provided direction in the development of test #85-1963, Colorfastness to Drycleaning; test #86-1957T, Durability of Applied Designs and Finishes, and test #108-1963T, Dimensional Changes in Drycleaning, all of the American Association of Textile Chemists and Colorists. The Institute has been active also in the development of USA Standard L22 for consumer textiles, and L24 for institutional textiles.

In addition to committee work in the above associations, the National Institute of Drycleaning is officially represented on committees of the American Society for Testing and Materials on petroleum products, lubricants, soap and detergents, and textile materials. It is also active in the American Association for Textile Technology.

NATIONAL INSTITUTE OF GOVERNMENTAL PURCHASING,
Albert H. Hall, Executive Vice President, 1001 Connecticut Avenue,
N.W., Washington, D. C. 20036

The Institute is an organization of governmental buying agencies of the United States, Canada and Puerto Rico. It is also affiliated formally with the Institute of Public Supplies of Great Britain, with an interlocking directorate. Its membership includes purchasing agencies of States, counties, cities, boards of education and special authorities and districts. The Institute is chartered as a nonprofit educational and technical organization. It is dedicated to the improvement of public purchasing through the interchange of technical and professional information and ideas. Founded in 1944, it is now engaged in its twenty-first year of service to the public purchasing profession.

Its aims and objectives are to: study, discuss and recommend improvements in governmental purchasing; interchange ideas and experiences and obtain expert advice on local, State and national

governmental purchasing problems; collect and distribute to governmental purchasing officials information on organization and administration of governmental buying; develop and promote simplified standards and specifications for governmental buying; promote uniform purchasing laws and procedures; work for or against proposals affecting the welfare of governmental buying agencies; give to taxpayers information on governmental buying problems in order to foster interest in public affairs and cooperation between governmental buyers and those they serve. The Institute has also developed a Training and Certification Plan for public purchasing executives which is national and international in scope.

NIGP has had a continuing interest in standardization. At its inception, the Institute established a specifications library which has grown to more than 10,000 specifications currently in use by the Federal Government and State and local governments. The acquisition of new specifications is announced each month in the official journal.

Several years ago the Institute established a committee on standards and tests for the purpose of developing its own series of recommended specifications. The first in this series has been issued and NIGP plans to issue six such specifications annually. It will expand its work in the field of standardization as rapidly as funds and facilities can be found to carry forward this important work.

NATIONAL INSULATION MANUFACTURERS ASSOCIATION,
J. M. Barnhart, Executive Secretary, 441 Lexington Avenue, New York, N. Y. 10017

The Association is a nonprofit trade association representing manufacturers of inorganic insulation for thermal industrial uses. Its purpose is to cooperate with other industries, technical societies, research organizations, and Government agencies in all matters that will disseminate accurate information regarding inorganic insulation. The Association has been called on regularly to counsel in the preparation of Federal Specifications, Military Specifications, Guide Specifications, etc.

By virtue of participation in the activities of American Society for Testing and Materials Committee C-16 on Insulation, the Association has aided constructively in preparing test methods and product standards relating to thermal insulating products.

It maintains active participation in the American Society of Heating, Refrigerating and Air-Conditioning Engineers, the National Fire Protection Association, and the Building Research Institute, and cooperates with other organizations that are interested in industrial inorganic insulation products.

NATIONAL LEAGUE FOR NURSING, Inez Haynes, Secretary, 10 Columbus Circle, New York, N. Y. 10019

This association develops criteria for evaluating organized nursing services and nursing education programs as guides to improvement. It has available published criteria for a hospital

department of nursing service, administration of a public health nursing service, a master's or baccalaureate program in nursing, an associate degree program in nursing, a diploma program in nursing, and a practical nursing program. Its public health nursing and nursing education criteria are used nationally for evaluation for accreditation. The hospital nursing criteria are a tool for individual hospitals to use in self-evaluation, improvement, information, and interpretation. Lists of NLN accredited nursing education programs are published annually. NLN has been the national accrediting agency for nursing education programs preparing students to become registered nurses since 1952; it initiated national accreditation for public health nursing services and practical nursing programs in 1966.

NATIONAL LIME ASSOCIATION, Robert S. Boynton, Executive Director, 4000 Brandywine Street, N.W., Washington, D. C. 20016

In order to assist lime consumers in the most efficient utilization of quick and hydrated lime, this Association has developed, through Association-sponsored research in concert with its Technical Committee, construction guide specifications, materials specifications, and general recommendations in the mortar, plaster, stucco, highway, and water purification fields. In addition, the Association is engaged in committee work with the American Society for Testing and Materials, United States of America Standards Institute, American Road Builders' Association, American Water Works Association, and the American Public Works Association in standards work that involves lime.

Some of the activity is reflected in education-promotional literature and movies published by the Association. A few examples are: "Water Supply and Treatment," "Exterior Masonry Construction," two authoritative technical bulletins; and "Lime Stabilization of Clay Soils for Better Roads," a 27½ minute, 16 mm., color-sound movie.

NATIONAL LUBRICATING GREASE INSTITUTE, C. V. Pickell, General Manager, 4635 Wyandotte Street, Kansas City, Missouri 64112

Founded in 1933, the Institute is a technical society whose objectives are: The development of better lubricating greases for the consumer and better grease lubrication engineering service to industry.

The Technical Committee of this Institute is charged with developing data pertinent to the manufacture, standardization, and application of the products of the industry. This committee and individual members of the Institute cooperate with committees of technical organizations in matters relating to standards and specifications.

The Technical Committee cooperates with the Lubrication Committee of the American Petroleum Institute, and with various technical committees of the Society of Automotive Engineers, United States of America Standards Institute, American Society for Testing and Materials, Anti-Friction Bearing Manufacturers Association, American Association of Railroads, American Petroleum Institute, and others.

The Institute offers cooperation to interested departments of the United States Government, including the Army, Navy, Air Force, Department of Commerce, Bureau of Standards, Federal Trade Commission, and the Interstate Commerce Commission.

NATIONAL MACHINE TOOL BUILDERS' ASSOCIATION,
Eugene J. Koschella, Director of Technical Services, 2139 Wisconsin Avenue, Washington, D. C. 20007

Machine tool builders have for many years been directly interested in the electrical equipment that forms so vital a part of the modern machine tool. With the tremendous development of better cutting tools and the necessity for wider speed ranges, has come a corresponding improvement in the material available from the manufacturers of industrial electrical equipment. Realizing that the safety of the operator and the maintenance of production are considerations of cardinal importance to machine tool users, the industry established an Electrical Standards Committee in 1938, and since that time has been constantly and actively engaged in the development of better electrical standards.

This Association publishes "Machine Tool Electrical Standards," which brings to the industry and its customers the latest thoughts of many skilled minds in the field, in keeping with the latest technological developments. The objectives have been to make tools safer to operate, more productive and less costly to maintain.

For the first time, some recognition is given to use of electronic and static devices. With the limited usage of these devices in the machine tool field at the present time, it is recognized that the experience gained has not been adequate to write complete standards covering these devices. The present provisions will be modified as field experience dictates.

NATIONAL MICROFILM ASSOCIATION, Vernon D. Tate,
Executive Secretary, P. O. Box 386, Annapolis, Maryland 21404

Standardization occupies an important place in the program of this Association. The principal operating mechanism is the standing NMA Standards Committee, which with its numerous subcommittees, directs attention to general and particular segments of the field of microreproduction. The Association sponsors sessions and papers devoted to standards at the Annual Conventions. These activities are reported and papers reproduced in the annual "Proceedings" volumes. National and international cooperation are effected through NMA membership on working committees of the United States of America Standards Institute and the International Organization for Standardization. NMA regards its standards efforts as being directed toward the establishment and adoption of USA and ISO Standards in the microreproduction field, and follows them when and as they are approved.

Publications of the Association include: "Glossary of Terms for Microphotography and Reproductions made from Micro-Images" NMA Informational Monograph No. 2, 3rd edition 1964; "NMA Microfiche Standards Specification M-1-1963" (a precision grid to accompany this specification was also prepared and made available); and "Engineering Data Microreproduction Standards and

Specifications," NMA Informational Monograph No. 1, April 1963. This volume is a compilation of published Federal standards and other applicable documents for the Department of Defense Engineering Data Microreproduction System. A new revised edition is in process.

NATIONAL MINERAL WOOL INSULATION ASSOCIATION,
Arthur W. Johnson, Secretary, 1270 6th Avenue, Rockefeller Center,
New York, N. Y. 10020

This is a nonprofit and unincorporated organization, rendering service to its members and the trade in connection with mineral wool insulating building products. It cooperates actively through appropriate committees in research and manufacturing and in the formulation and improvement of standards and specifications covering mineral wool products designed for and installed in buildings. It maintains active membership in the American Society for Testing and Materials, American Society of Heating, Refrigerating and Air-Conditioning Engineers, National Fire Protection Association, Building Officials Conference of America, Producers' Council, Chamber of Commerce, Building Research Institute, National Industrial Council, and National Association of Manufacturers. It cooperates in a helpful manner with such similarly interested associations and Government agencies as the United States of America Standards Institute, American Gas Association, National Electrical Manufacturers Association, Edison Electric Institute, Electric Heating Association, National Warm Air Heating and Air-Conditioning Association, National Association of Home Builders, Federal Housing Administration, Veterans Administration, and National Bureau of Standards. The purposes of the Association are to study and improve the industry's products, their quality, distribution, and application; and to publicize and otherwise inform the public, the trade, and industry members of research, investigations, and facts tending to promote the efficiency and welfare of the industry.

NATIONAL MODEL RAILROAD ASSOCIATION, Bob E. Bast,
Office Manager, P. O. Box 1328, Station C, Canton, Ohio 44708

This service organization was established in Milwaukee, Wisconsin, in 1935 to advance the hobby of scale model railroading through the development, adoption and regulation of standards, promote cooperation and understanding between producers and users of hobby materials, and increase opportunities for fellowship among model railroaders.

Membership comprises about 14,000 persons active in the field, primarily in the United States but also throughout the world, including members and firms in the trade as well as individual practicing hobbyists. The Association is subdivided into 16 geographic Regions, one each in the British Isles and Australasia and the balance in the United States and Canada. Management is directed by 8 elected nonpaid officers, who also serve with the 16 Regional Presidents as members of the governing Board of Trustees, and all services other than membership record-keeping and mailings are performed by a volunteer staff.

A basic function of the NMRA and the primary reason for its

founding is that of establishing and maintaining design standards for the manufacture of components for use in the hobby. These are intended to insure interchange between items produced by various sources and to improve performance. Initial specifications were adopted in 1936 and have been followed continuously by producers of scale railroad models and parts since that time, including refinements as the state of the art progressed.

Typical NMRA Standards define track and wheel relationships, electrical power specifications, and clearance dimensions between rolling stock and trackside structures. An additional class of specifications, known as NMRA Recommended Practices, covers desirable characteristics other than those necessary for physical interchange and is intended to enable manufacturers to improve their product in a manner most suited to the user's needs. A General Engineering Committee is charged with responsibility for development of Standards and Recommended Practices, and a separate Conformance-Inspection Committee checks manufactured products for compliance. Items meeting the Standards specifications are granted an NMRA Conformance Warrant which may be used in advertising as long as continued compliance is indicated by repeat inspections.

NATIONAL MUNICIPAL LEAGUE, Alfred Willoughby, Executive Director, 47 East 68th Street, New York, N. Y. 10021

Model laws are devised, published, and distributed by this organization which are intended to serve as standards and to stimulate uniformity in State, county, and city legislation. They include a model bond law, budget law, city charter (which provides the council-manager form of government), model county charter, election administration system, model real property tax collection law, registration system, State civil service law, model State constitution and others. In addition, the League has undertaken special projects, including a five-year program begun in 1965, to improve and strengthen State legislatures.

NATIONAL OAK FLOORING MANUFACTURERS' ASSOCIATION, Henry H. Willins, Executive Vice President, 814 Sterick Building, Memphis, Tennessee 38103

Standardization and simplification activities of this Association are carried on by its Grading, Milling and Inspection Committee, which has been functioning for more than 40 years.

The Association has adopted official rules on oak, birch, beech, hard maple, and pecan flooring, which cover in detail the grades and sizes of quartered and plain sawn stock. It cooperated with the National Bureau of Standards in the establishment of Commercial Standard CS56-60 covering grading rules for white and red oak flooring, which was published by that Bureau; also with the Federal Government in the formulation of the Federal Specification for Hardwood Flooring, which includes references to the grading rules of this Association for oak, birch, beech, and hard maple flooring.

This Association maintains a rigid supervision of species, manufacture, kiln drying, bundling, and all other features pertaining to oak, birch, beech, and hard maple so that its sizes and grades will

be maintained. The use of the Association's registered trade name "NOFMA" has been granted to all of its members whose stock of oak flooring has been found to comply with the Association's official grading rules. It also maintains a reinspection service available for the retail dealers who purchase products of member companies, so that, in the event there is doubt concerning the quality of stock bought, a reinspection may be had and the matter settled immediately.

NATIONAL PAINT, VARNISH AND LACQUER ASSOCIATION,
Robert A. Roland, Executive Vice President, 1500 Rhode Island Avenue, N.W., Washington, D. C. 20005

This Association cooperates with the National Bureau of Standards and other Federal Agencies on research problems; also with the General Services Administration and the Armed Forces in preparing specifications for paints and other protective coatings.

During the past 51 years the Association has issued over 800 publications relating to its researches and dealing with the properties of, test methods for, and the proper utilization of paints, varnishes, lacquers, and chemical coatings.

The Association is active on the American Society for Testing and Materials committee dealing with the development of specifications and test methods for paints and related products. It is represented on a number of other ASTM committees having problems related to the coatings industry or its raw materials. The Association is also active in standardization procedures, as regards test methods, in the American Oil Chemists' Society, the Federation of Paint and Varnish Production Clubs, and the Intersociety Color Council.

NATIONAL PAPER BOX MANUFACTURERS ASSOCIATION,
Norman T. Baldwin, Executive Director, Suite 910, City Centre Building, 121 North Broad Street, Philadelphia, Pennsylvania 19107

This Association, representing the rigid paper box industry, has developed specifications for box-covering papers which include standards for fade resistance, surface or color rub, put-up, sample books, and billing terminology. The Specifications Committee of the Association is promoting acceptance of these standards to paper mills, distributors, and box manufacturers. Further work is being done by the committee on paperboard, adhesives, and paper boxes.

NATIONAL PARTICLEBOARD ASSOCIATION, Robert E. Dougherty, Executive Director, 711 14th Street, N.W., Washington, D. C. 20005

This Association consists of manufacturers of mat-formed wood particleboard who participate in the development of standards through the Association's Technical Committee. NPA has promulgated Physical Property Specifications for Mat-Formed Wood Particleboard for Floor Underlayment, which is included by reference in Federal Housing Administration's Use of Materials Bulletin No. UM-28, Mat-Formed Wood Particleboard for Floor Underlayment. The Association sponsored Commercial Standard

CS236-66 for Mat-Formed Particleboard (Interior Use), and published Interim Standard for Mat-Formed Wood Particleboard as a service to consumers while the Commercial Standard was being revised. In addition, NPA has assisted the General Services Administration in the preparation of Interim Federal Specification LLL-B-00800 for Building Board (Particleboard) Hard Pressed, Vegetable Fiber.

NATIONAL PLANT FOOD INSTITUTE, Paul T. Truitt, President,
1700 K Street, N. W., Washington, D. C. 20006

This organization supports standardization through simplification and uniformity in State fertilizer regulatory laws and uniformity and simplification of methods of chemical analysis. Work on these problems is done by Institute staff members and its Chemical Control Committee. The Institute cooperates with a Task Force comprising selected State, Federal and industry personnel competent in this field.

The objective of such standardization is to increase the accuracy and precision of the chemical analysis of fertilizers and fertilizer materials.

Further, the Institute supports the enactment by all States of uniform fertilizer laws as recommended by the Association of American Fertilizer Control Officials. Also, the Institute supports further standardization of reporting and publication forms used in the various States to record the consumption of fertilizers by materials and grades on an annual, semiannual, quarterly, or monthly basis, by States, including in some cases figures by counties.

NATIONAL PRESERVERS ASSOCIATION, Robert H. Kellen,
Executive Vice President, 25 East Chestnut Street, Chicago, Illinois
60611

Association definitions and standards for fruit butters, preserves, jams, jellies and artificially sweetened fruit jellies and preserves have been officially published by the Food and Drug Administration. The Association is presently developing a standard for raw material procurement to be followed by finished product specifications and, at a later date, sanitation procedures.

NATIONAL PRINTING INK RESEARCH INSTITUTE, William
D. Schaeffer, Associate Research Director, Lehigh University, Bethlehem, Pennsylvania 18001

The Institute was established at Lehigh University in 1946. It was founded to engage in scientific research on printing inks, on the equipment and techniques involved in their production, and on the printing surfaces to which they are applied. Recognizing the printing ink industry's need for such information, one of the projects undertaken by NPIRI was a compilation of a set of Standard Test Methods. Such a series of tests is an essential basis for interchange of technical information, for ink research, for scientific control of ink production, and thus for the resulting advances in ink technology.

The material in the manual, consisting of forty-four tests, has

been divided into seven main sections: Sampling and Preparation, Qualitative Chemical Tests, Quantitative Chemical Tests, Physical Tests, Performance Tests, Resistance Tests, and Tests for Related Materials. The last section covers materials such as paper, rollers and blankets, printing plates and fountain solutions, which do not enter into ink production but contact the ink and influence its behavior during use. An evaluating procedure is carried out on each recommended method both by the Institute and by individual companies cooperating with the Institute. It is intended that this group of test methods grow with time in the directions indicated by the needs of the industry.

NATIONAL READY MIXED CONCRETE ASSOCIATION,
V. P. Ahearn, Managing Director; Delmar L. Bloem, Director of Engineering, 900 Spring Street, Silver Spring, Maryland 20910

The standardization work of this Association falls into two categories: its own technical committees develop standards for the operation of ready-mixed concrete equipment, the sampling and testing of ready-mixed concrete and the design of concrete mixtures; representatives of the Association are active in the standardization work of pertinent technical organizations such as the American Society for Testing and Materials, the American Concrete Institute, and others.

This Association, jointly with the National Sand and Gravel Association, maintains research facilities in cooperation with the University of Maryland at College Park, Md. This joint Research Laboratory conducts research pertinent to industry problems, and particularly those dealing with standardization of specifications and test methods. The policies of the laboratory are governed by a Joint Research Committee representative of the two Associations.

NATIONAL RESTAURANT ASSOCIATION, Donald Greenaway,
Executive Vice President, 1530 North Lake Shore Drive, Chicago, Illinois 60610

This Association is the sponsor of United States of America Standards Institute Sectional Committee Z64 Mass Feeding Kitchen Utensils and Containers. The committee has for its scope the development of dimensional standards for utensils and containers used in food preparation and service in mass feeding. The Association also participates in the work of USASI Sectional Committees L24 Institutional Textiles, Z16 Standardization of Methods of Recording and Compiling Accident Statistics, and Z108 Method of Recording and Measuring Patron Accident Statistics.

NRA works with the National Sanitation Foundation in the development of standards for food service equipment. It is also involved with the National Fire Protection Association on standards for grease hood and duct systems, safety to life in assembly areas, and the various fire protection systems such as dry chemicals and carbon dioxide which are pertinent to a restaurant kitchen and dining room.

The Association cooperates with the U. S. Department of Agriculture, Wholesale and Retail Research Branch, to formulate labor productivity standards among commercial cafeterias.

Future plans call for continued work in the areas of food

packaging, food distribution, and extending the study of labor productivity standards.

NATIONAL RETAIL HARDWARE ASSOCIATION, Russell R. Mueller, Managing Director, 964 North Pennsylvania Street, Indianapolis, Indiana 46204

This Association engages in continuous programs furthering standardization of many management, merchandising, and advertising procedures in independent retail hardware stores. Increased efficiency and economy of operation for such stores has resulted in standardization of accounting systems, basic stocks, store layout, store fixture specifications, sales planning, and newspaper advertising.

Leadership offered in standardization of retail store fixtures has brought about greater industry-wide usage of National Retail Hardware Association Merchandising Laboratory-approved manufacturer display units, package design, and point-of-sale material. Laboratory consultation and seal of approval are granted without cost to any manufacturer whose merchandising unit, package, or program meets basic NRHA established standards.

NATIONAL RETAIL MERCHANTS ASSOCIATION, James J. Bliss, Executive Vice President, 100 West Thirty-first Street, New York, N. Y. 10001

This Association takes an active part in the formulation of standards and specifications relative to retail store organization, retail systems, retail trade terminology, business practices, and specifications for commodities used in the trade.

In carrying forth this work, the Association cooperates actively with the United States of America Standards Institute and other technical and trade organizations. The Association initiated programs for the establishment of Simplified Practice Recommendations covering set-up paper boxes, folding paper boxes, corrugated-fiber boxes, and notion and millinery paper bags, under the auspices of the National Bureau of Standards, U. S. Department of Commerce.

A few years ago it cooperated in the revision of Simplified Practice Recommendations R126, R127, R128, and R129. It also cooperated in the development of Simplified Practice Recommendation R177 for single-phase corrugated board-rolls.

Also in collaboration with the National Bureau of Standards, the Association assisted in the development of Commercial Standards CS62-38 for colors for kitchen accessories, and CS63-38 for colors for bathroom accessories. It also assisted in the establishment of Commercial Standards CS59-41 for woven dress fabrics (testing and reporting), and CS39-37 for wool and part-wool blankets. This latter standard defines the terms used to describe the fiber content of blankets, if represented in any way to be made wholly or in part of wool; regulates the sizes of type to be used in describing the fiber content of part-wool blankets; provides methods of test for determining the percentage by weight of the total fiber content represented by wool fibers therein, in cases where the buyer and seller do not agree on method; and illus-

trates the manner by which manufacturers and distributors may guarantee compliance with the Commercial Standard.

The Association cooperates actively with the National Bureau of Standards in the establishment of standard sizing of all apparel.

This organization is a member body of the United States of America Standards Institute and participates actively in the work of several USASI committees. It is officially represented on the Sectional Committee on Standards and Specifications for Refrigerators.

NRMA is sponsor of USASI's L22 Standards, which relate to the end uses of all textiles. In 1965 it sponsored the updating of L22.

NATIONAL SAFETY COUNCIL, Howard Pyle, President, 425 North Michigan Avenue, Chicago, Illinois 60611

The purpose of this organization is the conservation of human life through a continuous campaign of accident prevention and the promotion of industrial health. It promotes industrial, traffic, public, home, farm, and school and college safety chiefly through the gathering and distribution of information about the causes of accidents and methods for their prevention. The Council investigates and compares methods of making mechanical equipment safer and of protecting those who use it; precautions in using hazardous devices, materials and processes; and develops programs for stimulating interest in safety.

In cooperation with other organizations the Council takes part in the standardization work of the United States of America Standards Institute. It is sponsor or joint sponsor of the Safety Standards which have been or are being developed under USASI procedures on the following: methods for recording and measuring work injury experience and compiling industrial accident causes; standards for safety for the construction industry; floor and wall openings, railings and toe boards; identification of piping systems; window cleaning; general industrial stairs; power presses; forging and hot metal stamping; rubber machinery; signaling devices and controls for graphic arts equipment; identification of gas mask canisters; paper and pulp mills; textile safety standards; specifications for accident prevention signs; performance requirements for protective occupational footwear; safety color standards; standards for radiation protection; power operated platforms for exterior building maintenance; manual on classification of motor vehicle traffic accidents; recording and measuring motor vehicle fleet accident experience; long shoring safety on the docks; specifications for accident prevention tags; requirements for architectural glazing material; and recording and measuring patron accident statistics.

In addition, the National Safety Council is officially represented on approximately 75 USASI sectional committees in preparing standards on various subjects in connection with safety of individuals or the use of equipment and devices.

The Council has prepared and issued 365 Data Sheets, 3 Manuals on General Occupational Accident Prevention, and 5 Manuals on Accident Prevention in specific industries.

NATIONAL SAND AND GRAVEL ASSOCIATION, V. P. Ahearn,
Managing Director; **Delmar L. Bloem, Director of Engineering, 900**
Spring Street, Silver Spring, Maryland 20910

The standardization work of this Association falls into two categories: committees of the Association deal with specifications for various uses; representatives of the Association are active in the standardization work of pertinent technical organizations such as the American Society for Testing and Materials, the American Concrete Institute, the American Railway Engineering Association and others. It also cooperates with the National Crushed Stone Association and the National Slag Association through the Joint Technical Committee of mineral aggregates associations in the development of standards and coordination of technical problems of mutual interest.

This Association, jointly with the National Ready Mixed Concrete Association, maintains research facilities in cooperation with the University of Maryland at College Park, Md. This Joint Research Laboratory conducts research pertinent to industry problems, and particularly those dealing with standardization of specifications and test methods. The policies of the laboratory are governed by a Joint Research Committee representative of the two Associations.

NATIONAL SANITATION FOUNDATION, Walter F. Snyder,
Executive Director, School of Public Health, University of Michigan,
Ann Arbor, Michigan 48104

The Foundation is a noncommercial, nonprofit organization seeking solutions to all problems involving cleanliness and sanitation. It is dedicated to the prevention of illness and improvement of quality living through a better environment. It sponsors or conducts objective research and educational programs to find improved sanitation methods. These studies provide an authoritative basis for the establishment of minimum sanitation standards for equipment, products and devices that are generally acceptable to health authorities.

The Foundation has developed through cooperation with industry, official and nonofficial health agencies, the following standards and Criteria: No. 1, Soda Fountain and Luncheonette Equipment; No. 2, Food Service Equipment; No. 3, Spray-Type Dishwashing Machines; No. 4, Commercial Cooking and Warming Equipment; No. 5, Commercial Hot Water Generating Equipment; No. 6, Dispensing Freezers; No. 7, Commercial Refrigerators and Storage Freezers; No. 8, Commercial Powered Food Preparation Equipment; No. 9, Diatomite Type Filters for Swimming Pool Equipment; No. 10, Sand Type Filters for Swimming Pool Equipment; No. 11, Recessed Automatic Surface Skimmers; No. 12, Automatic Ice Making Equipment; No. 14, Thermoplastic Materials, Pipe, Fittings, Valves, Traps and Joining Materials; C-1, Vending Machines; C-2, The Evaluation of Special Equipment and/or Devices; C-3, Thermoset Reinforced Plastic; C-4, Reinforced Plastic Tanks; C-5, Cartridge Type Filters; C-6, Cloth Towel Dispensers; and C-7, Plastic Lined Pipe.

The National Sanitation Foundation Seal of Approval has been

authorized for use on over 12,000 items manufactured by 600 manufacturers.

NATIONAL SASH AND DOOR JOBBERS ASSOCIATION, Carl W. Nagle, Executive Secretary, 20 North Wacker Drive, Chicago, Illinois 60606

This Association, formed in 1964 by the merger of two regional jobber associations, Northern and Southern, has been active in the support and development of Commercial Standards related to window and door products. In cooperation with the National Woodwork Manufacturers Association, NSDJA since 1953 has helped prepare and further Commercial Standards 190, 204, 205, 264, 265 and 266, relating to double hung, casement, awning, and single hung wood window units. In addition, the Association operates a wood window promotion program based upon quality testing in accordance with these standards.

NSDJA initiated and is currently involved in developing a Commercial Standard for wood interior hinged door units. It also has under consideration a Commercial Standard for prime-painting of millwork products.

In addition the Association is interested in various standards relating to the softwood plywood industry and, representing distributors, assists in the coordination of problems connected with plywood Commercial Standards.

NATIONAL SCALE MEN'S ASSOCIATION, William S. Fuller, President, c/o H. J. Fuller and Sons, Inc., Columbus, Ohio 43212

This organization is composed of approximately 850 technical men engaged in the design, production, sale, installation, maintenance, testing, and operation of weighing machines.

It has organized 11 committees which are assigned to study and develop certain phases of the scale industry, including the development of standards and specifications covering railway and industrial track scales; highway vehicle scales; built-in, self-contained, and portable scales; counter scales; grain scales, automatic and hand-operated scales; automatic indicating and recording railway and industrial scales, automatic indicating and recording scales other than large capacity, electronic and hydraulic scales of large and small capacity; pits and foundations; weighing practices, scales used for transportation and labor charges; weighing practices, scales used for purposes of barter; corrosion prevention; construction materials; and welding and heat treatment.

The Association has adopted specifications for overhauling and repair of heavy-capacity scales; light industrial service track scales; railway track-scale test weight cars; standard code of rules relating to maintenance and transportation of track-scale test weight cars; and a definition of a standard test of a railway track scale.

The standards and codes which have been adopted by the Association have received the indorsement of the National Conference on Weights and Measures and the American Railway Engineering Association.

NATIONAL SCHOOL SUPPLY AND EQUIPMENT ASSOCIATION, Dave McCurrach, Executive Manager, 27 East Monroe Street, Chicago, Illinois 60603

This Association, founded in 1916, is composed of manufacturers and distributors of school equipment and supplies other than textbooks. Standards produced by the Association include Recommended Standards for Design of Interior Folding and Telescopic Seating, which establishes uniform standard criteria for the design, manufacture, and installation of interior folding and telescopic seating normally used in school gymnasiums, and Testing Procedures for Measuring Sound Transmission Loss Through Movable Walls and Folding Partitions. This standard establishes a uniform set of practices for the installation of the test specimen, the conduct of the test, and the certification of the results when operable walls are tested for sound transmission loss in accordance with American Society for Testing and Materials Designation E90-61T, Tentative Recommended Practice for Laboratory Measurement of Airborne Sound Transmission Loss of Building Floors and Walls.

NATIONAL SILO ASSOCIATION, E. H. Martin, Managing Director, 1201 Waukegan Road, Glenview, Illinois 60025

This Association represents manufacturers of concrete, steel, tile, and wood for building tower silos, as well as manufacturers of silo accessories, silage feeding equipment, and loading and unloading silage equipment.

In cooperation with various organizations, the Association has developed suggested standards for the structural materials used by the industry. Manufacturers using concrete for silos have adopted Recommended Practice for the Construction of Concrete Farm Silos (ACI 714-46) as a suggested standard of the American Concrete Institute. NSA has cooperated with technical associations of the steel industry concerning standards for steel used in steel silo production. Structural Clay Products Institute cooperated in the development of standards for silo tile. Wood silo manufacturers and NSA have adopted the silo stave-pattern standard grading and dressing rules of the West Coast Lumbermen's Association.

NATIONAL SLAG ASSOCIATION, E. W. Bauman, Managing Director, 613 Perpetual Building, Washington, D. C. 20004

The Association cooperates actively with specification-writing organizations at the national and State levels in formulating and revising aggregate specifications and in development of standards covering test procedures. This cooperative program is carried out mainly through representation on technical committees of such national organizations as: United States of America Standards Institute, American Society for Testing and Materials, American Concrete Institute, Association of Asphalt Paving Technologists, American Railway Engineering Association, American Society of Civil Engineers, American Public Works Association, and the Industrial Hygiene Foundation. Standardization of aggregates is further promoted by research dealing with aggregates and their end-use products, conducted in the Association's Laboratory

located in Youngstown, Ohio. Much of the research thus conducted is planned and programmed by the Association's Technical Committee. This Committee is composed of technical representatives from the various Member Companies.

NATIONAL SLATE ASSOCIATION, W. S. Hays, Secretary, 455 West 23rd Street, New York, N. Y. 10011

Standard specifications have been formulated and adopted by this Association covering the use of slate for floors, terraces, walks, and roofs. These specifications are in the form in which they may be incorporated into architects' specifications or made the subject of construction contracts, and include requirements on metalwork, weight, and laying of felt, laying of slate, etc.

This Association cooperated with the National Bureau of Standards in simplification activities which resulted in the establishment of standard sizes of structural slate for plumbing and sanitary purposes, roofing slate, and blackboard slate, published as Simplified Practice Recommendations by the National Bureau of Standards.

The Association is represented on Sectional Committees functioning under the procedure of the United States of America Standards Institute.

NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS, Sumner G. Whittier, Executive Director, 2023 West Ogden Avenue, Chicago, Illinois 60612

Every day over 20 million adults and children with physical disabilities are being deprived of the opportunity to go to school, to attend religious services, to work and to play because of architectural barriers which prevent adequate independent access and use of buildings and facilities. This Society, in cooperation with the President's Committee on Employment of the Physically Handicapped, has as its objectives the elimination of architectural barriers across the nation by: (1) Increasing public awareness of the opportunities denied the handicapped for participation in community life because of architectural barriers; (2) stimulating community action to improve the access and use of buildings intended for public use to the disabled by encouraging the elimination of architectural barriers in present facilities; and (3) assuring the prevention of architectural barriers in future construction through education and modification of Municipal Building Codes and Legislation.

Together with the President's Committee on Employment of the Physically Handicapped, the Society sponsors United States of America Standards Institute Sectional Committee A117 Facilities in Public Buildings for Persons with Physical Handicaps. The committee has developed specifications for Making Buildings and Facilities Accessible to, and Usable by the Physically Handicapped (USA A117.1-1961), which contains building specifications intended to make buildings and facilities used by the public accessible to and functional for the physically handicapped to, through, and within their doors without loss of function, space, or facility where the general public is concerned.

At the present time 22 States, as a result of these efforts, have

enacted mandatory legislation relative to the elimination of architectural barriers in buildings built with State funds. The General Services Administration has adopted the standards and is including them in future Federal building designs.

Following community surveys of architectural barriers in various cities, twenty-five "Guides for the Handicapped" have been published which provide factual information regarding the accessibility factors of buildings intended for public use. In this way, the handicapped individual can judge for himself which buildings in his community he is able to use in light of his own ambulatory limitations.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS,
Dr. John W. Ferree, Executive Director, 16 East 40th Street, New York, N. Y. 10016

This Society, founded in 1908, consists of professional and lay persons interested in preventing blindness and conserving sight through a nationwide comprehensive program of public and professional education, research, industrial and community services. Services include promotion and support of local glaucoma screening programs, preschool vision testing, industrial eye safety, collection of statistics and other data on the nature and extent of causes of blindness and defective vision, improvement of environmental conditions affecting eye health in schools and colleges, and provision of special education facilities for partially seeing children.

The Society is the sponsor of United States of America Standards Institute Sectional Committee Z87 Safety Code for Eye Protection. This committee deals with safety requirements for the protection of faces and eyes of persons exposed to hazards of flying particles, dusts, splashing liquids, molten metals, vapors, and harmful radiation. NSPB is also working on USASI Sectional Committee Z97 Safety Requirements for Architectural Glazing Material, as well as on a project to revise Z26.1-1950 Safety Code for Safety Glazing Materials for Motor Vehicles Operating on Land Highways. Projects completed include the following USA Standards: A11.1-1965 Practice for Industrial Lighting; A23.1-1962 Guide for School Lighting; Z2.1-1959 Safety Code for Head, Eye, and Respiratory Protection; and Z80.1-1964 Prescription Requirements for First-Quality Glass Ophthalmic Lenses.

NATIONAL SOYBEAN PROCESSORS ASSOCIATION, Robert G. Houghtlin, President, 3818 Board of Trade Building, Chicago, Illinois 60604

Standardization of quantity and grades of soybean oil and soybean meal, and development of standard trading rules constitute important activities of this Association. Upon the recommendations of its Soybean Oil Trading Rules Committee, the Association adopted standard specifications for crude domestic soybean oil covering quality, grade, and methods of analysis. Standard specifications for crude, degummed, and once-refined soybean oil have been developed for export use. In addition, its Meal Trading Rules Committee served a similar purpose in providing standards

and trading rules for soybean meal.

The Association's Soybean Grades and Contracts Committee cooperates with the U. S. Department of Agriculture in seeing that fair and just grades for soybeans are established by the Department of Agriculture and other bodies so that equal protection is afforded to buyer and seller.

NATIONAL SUPPLY ASSOCIATION OF AMERICA, Stanley Z. Selib, Executive Director, 320 Washington Street, Brookline, Massachusetts 02146

This Association, founded in 1938, is the trade association for retailers in the plumbing, heating, building materials and allied fields. NSAA is engaged in setting standards and specifications for numerous items in the plumbing field for distribution to its retail member stores. In addition, the Association works closely with manufacturers to provide them with statistical data for use in establishing standards, and makes an effort, whenever possible, to cooperate with Federal agencies and the United States of America Standards Institute in developing standards for products within its area of interest.

The Association is also concerned with setting standards for municipal plumbing codes to the end that there will be less divergence from locality to locality in the various plumbing and building codes.

NATIONAL TERRAZZO AND MOSAIC ASSOCIATION, W. Kenneth Miller, Director of Architectural Services, 1420 New York Avenue, N.W., Washington, D. C. 20005

This Association is concerned with standardization of details and the promulgation of specifications for terrazzo floors and mosaics. Published standards, developed in collaboration with the chemical and plastics industries, cover sand cushion, bonded strip, monolithic, conductive hospital surgical floors, radiant heating, and all precast items, such as stairs, bases, window sills, wainscots, shower receptors and trench covers in portland cement terrazzo, and in non-cementitious matrices for thin-set terrazzo.

NATIONAL TUBERCULOSIS ASSOCIATION, Dr. James E. Perkins, Managing Director, 1790 Broadway, New York, N. Y. 10019

Diagnostic Standards and Classification of Tuberculosis, last edition 1961, used worldwide in several languages, is produced under supervision of the American Thoracic Society, Medical Section of the NTA. ATS also publishes standards for tuberculosis hospital administration, and guides on various aspects of tuberculosis therapy.

The Diagnostic Standards and Classification of Tuberculosis is now undergoing a new edition which will probably not be available until 1966.

NATIONAL WARM AIR HEATING AND AIR-CONDITIONING ASSOCIATION, James M. Martin, Managing Director, 640 Engineers Building, Cleveland, Ohio 44114

A major function of this Association is the development of standards for the design and installation of warm air heating and

air-conditioning systems. The standards which are established are based on a thorough research program in ducted air system investigation, both heating and cooling, sponsored by the Association at the Engineering Experiment Station of the University of Illinois.

Standards data are published in practical, manual form, under the direction of Manual Committees, for use by installing dealer-contractors. Manuals are revised consistently in keeping with the development of the latest data.

Current manuals (1965) are: Manual 1, How to Make a Comfort Survey (4th ed.); Manual 2, How to Check Frame House Construction (4th ed.); Manual 4, Installation Techniques For Perimeter Heating and Cooling (9th ed.); Manual 5, Design and Installation of Gravity Warm Air Heating System (5th ed.); Manual 6, Adjusting Air Conditioning Systems for Maximum Comfort (3rd ed.); Manual 7A, Design and Installation of Warm Air Ceiling Panel Systems (3rd ed.); Manual 8, Application Guide for Residential Central Air Conditioning Systems (Winter and Year-'Round) (5th ed.); Manual 9, Design and Installation of Warm Air Winter Air Conditioning Systems and Year-'Round Air Conditioning Systems (7th ed.); Manual 9-S, Perimeter Warm Air Heating and Ventilating of Industrial, Commercial and Public Buildings (1st ed.); Manual A, What Is Comfort Air Conditioning? (1st ed.); Manual E, Room Air Distribution Considerations (1st ed.); Manual G, Selection of Distribution System (1st ed.); Manual J, Load Calculation (2nd ed.); and Manual K, Equipment Selection and System Design Procedures (1st ed.)

NATIONAL WATER WELL ASSOCIATION, Edward H. Martin,
Executive Secretary, 1201 Waukegan Road, Glenview, Illinois 60025

This is a national trade association consisting of water well contractors, manufacturers, water equipment wholesalers and suppliers, and technical personnel interested in the problems of locating, developing, and using underground water supplies. Objectives of the Association are to assist, promote, encourage, and support the interests and welfare of the water well industry in all of its phases; to foster, aid, and promote scientific education, standards, research, and techniques of well construction and development, and to advance the science of ground water hydrology. The Association, in cooperation with the American Water Works Association, has developed a "Standard for Deep Well" publication and a 12-point "Code of Ethical Practice."

NATIONAL WHEEL AND RIM ASSOCIATION, Edward D. Meeker, Executive Director, 1444 Home Street, Jacksonville, Florida 32207

This Association, founded in 1924, is concerned with standardization as regards the proper rebore limits for passenger car and heavy duty brake drums.

Until 1952 there was no established and acceptable safety rebore limit for automotive brake drums, with the result that many were rebored beyond safe limits. In 1953 the Association accepted the responsibility for promoting a specific rebore limit of .060, covering all passenger car drums. This limit was established as a result of tests by the Automobile Manufacturers Association.

This program, identified as The O! Six! O! Program (.060), has since become an industry accepted standard.

In 1965 the Association published a recommended rebore limit for truck, bus and trailer brake drums which provided for a rebore limit of .080, and is known as The Oh! Eight! Oh! Program. This new limit was a result of studies made by a joint task force of the Automobile Manufacturers Association and the Truck-Trailer Manufacturers Association. This standard as well is almost completely accepted by the automotive industry.

NATIONAL WHOLESALE HARDWARE ASSOCIATION, Thomas A. Fernley, Jr., Managing Director, 1900 Arch Street, Philadelphia, Pennsylvania 19103

This organization of wholesale distributors has cooperated with other units of industry in the establishment of Simplified Practice Recommendations covering standard sizes and varieties of sheet steel, flashlight cases, insecticide and fungicide packages, hacksaw blades, shovels, spades, scoops, loaded paper shot shells, terneplate, and eaves trough and conductor pipe, which were published by the National Bureau of Standards. It initiated the movements which resulted in the formulation of the Simplified Practice Recommendations for the last three projects enumerated above, the latter two in conjunction with its affiliate, the National Association of Sheet Metal Distributors.

NATIONAL WOODEN PALLET MANUFACTURERS ASSOCIATION, William H. Sardo, Jr., Executive Vice President, 1619 Massachusetts Avenue, N.W., Washington, D. C. 20036

This Association, founded in 1947, consists of manufacturers and distributors of wooden pallet and pallet container products used for handling, warehousing, and transporting goods. The Association publishes standard specifications covering the construction of hardwood, softwood, and plywood pallets. These standards provide minimum requirements for a series of nine quality grades covering various wooden pallets.

NATIONAL WOODWORK MANUFACTURERS ASSOCIATION, James E. Nolan, Secretary-Manager, 400 West Madison Street, Chicago, Illinois 60606

This Association has taken an active interest in the standardization of commodities in its industry. It was sponsor of the following standards published by the National Bureau of Standards: Commercial Standard CS120-58 for Ponderosa Pine Doors; CS171-58 for Hardwood Veneered Flush Doors; CS163-64 for Ponderosa Pine Windows, Sash, and Screens; CS190-64 for Double-Hung Wood Window Units; CS204-64 for Wood Awning Window Units; CS205-64 for Wood Casement Window Units; CS208-57 for Wood Door and Window Frames; CS262-63 for Preservative Treatment for Millwork; CS264-64 and 265-64 for Horizontal Wood Window Units; and CS266-64 for Single Hung Wood Window Units.

NATURAL GAS PROCESSORS ASSOCIATION, Carl Sutton,
Secretary, 429 Kennedy Building, Tulsa, Oklahoma 74103

This Association (formerly the Natural Gasoline Association of America) was founded in 1921 to develop standard tests and specifications for casinghead gasoline. Specifications, particularly for vapor pressure, were established that are still referred to in casinghead contracts written today. Later, tests to determine the gasoline content of natural gas were developed.

In recent years, the Association's interest has been chiefly in the field of LP-Gas (propane and butane) and natural gas. Vapor pressure and composition specifications have been established for LP-Gas, and analytical procedures, contaminant tests, and approved loading techniques have been developed for LP-Gas and for natural gas. Many of these tests and specifications have been accepted and published by the American Society for Testing and Materials.

NEW ENGLAND SHOE AND LEATHER ASSOCIATION, Maxwell
Field, Executive Vice President, 210 Lincoln Street, Boston, Massachusetts 02111

The New England Shoe and Leather Association has undertaken a major program to develop shoe last standardization for the Industry. Cooperating in this endeavor are shoe manufacturers and officers and members of the Last Manufacturers Association. This project covers standardization of both terminology and measurements of lasts, and will benefit the shoe manufacturer, the last manufacturer and the consumer. Shoe machine manufacturers will benefit from standardized measurements by knowing automatically the location of the various parts of the shoe on the last.

Terminology for last parts in the men's and women's shoe segment of the New England Shoe and Leather Association membership has been agreed upon. The same agreement has been reached by the Last Manufacturers Association. Much of this terminology is the same in the children's and infant's last field.

NEWSPAPER ADVERTISING EXECUTIVES ASSOCIATION,
Robert C. Pace, Secretary-Treasurer, 425 North Vermilion, Danville, Illinois 61834

This Association, founded in 1911, is a professional organization of daily newspaper advertising executives. In the interest of standardization and to reduce the details of checking measurements and billing on the part of newspapers, agencies and advertisers, the Association, together with the American Association of Advertising Agencies, proposed that a Resolution on Mat Shrinkage be adopted among newspapers and be inserted in rate cards. This Resolution, adopted on June 12, 1946, states that "the advertiser and or agency shall designate the width in columns and exact depth, in which case the newspaper agrees to publish and bill advertisement in exact space ordered; measurements to be from cut-off rule to cut-off rule. Where ads are positioned at the bottom of the page a dash or dot may be substituted for the cut-off rule to designate the true bottom of typed page."

The Association also cooperated with the American Association of Advertising Agencies by recommending to its own membership the adoption of "Directions for Preparing Standard Form of Rate Card for Newspapers" and "Recommended Breakdowns for Consumer Media Data."

OPTICAL MANUFACTURERS ASSOCIATION, Charles F. Oddy,
Secretary-Treasurer, 30 East 42nd Street, New York, N. Y. 10017

The Association has developed and makes available "OMA Marking Standards." These standards cover the marking and stamping of optical frames and mountings made in whole or in part of gold. The Association has worked out methods for marking temple lengths and measuring frame and lens sizes, and has adopted screw standards for ophthalmic frames. The Association was active in the United States of America Standards Institute program covering quality standards for ophthalmic lenses.

OPTICAL SOCIETY OF AMERICA, Mary E. Warga, Executive
Secretary, 1155 Sixteenth Street, N.W., Washington, D. C. 20036

The standardization and specification work of this Society is handled largely by technical committees which have published reports in the Society's journal on visual sensitometry; colorimetry; photometry; standard wavelengths; nomenclature and standards; photographic standards of intensity; geometrical, physiological, and physical optics; photochemistry and photography; radiometry; and spectrophotometry. The latest and most elaborate of these technical reports appeared as a book, "The Science of Color," published in 1953 by Thomas V. Crowell Co., for the Colorimetry Committee of the Optical Society of America, and in 1963 by the Optical Society of America.

In addition, the Society cooperates with other technical organizations in standardization and specifications within the various branches of optics. The society cooperates actively with the International Commission for Optics and the International Commission on Illumination. It cooperates extensively with the United States of America Standards Institute, serving as sponsor for the USASI Sectional Committee on Optics, and having representatives on the USASI Photographic Standards Board and on seven USASI sectional committees in photography, motion pictures, safety glass, and ophthalmic lenses. The Society also maintains representation on boards or committees of the American Institute of Physics, the National Research Council, the American Association for the Advancement of Science, and the Intersociety Color Council.

OUTDOOR POWER EQUIPMENT INSTITUTE, Harold K. Howe,
Executive Secretary, 734 15th Street, N. W., Washington, D. C. 20005

The Institute is sponsor of a United States of America Standards Institute project for the development of Safety Standards for Lawn Mowers as well as engineering specifications and safe design recommendations designated as B71.1-1964.

OYSTER INSTITUTE OF NORTH AMERICA, Mrs. David H. Wallace, Director, 22 Main Street, Sayville, L. I., New York 11782

This Institute, founded in 1908, is composed of shellfish growers, dealers, transporters and suppliers to the industry. It works with government agencies in matters of legislation, sanitation standards, controls and conservation. At approximately two-year intervals the Institute, in cooperation with the Public Health Service, sponsors National Shellfish Sanitation Workshops. At these meetings, Public Health Service personnel in the Environmental Engineering and Food Protection Division, work with industry members to formulate or modify bacterial standards for the meats of both oysters and clams, for growing waters, and for the processing of the species.

Each State has its individual standards set by the State Health Department. However, they must meet the standards set by the cooperative Public Health Service-Industry agreements to move into interstate commerce.

PACKAGING MACHINERY MANUFACTURERS INSTITUTE, Leif Oxaal, Executive Director, 60 East 42nd Street, Suite 863, New York N. Y. 10017

This Institute is concerned primarily with technical phases of packaging by automatic equipment, through the exchange of inter-industry information. Working through several committees, the Institute engages in work leading to simplification and standardization. It cooperates with all organizations concerned with packaging techniques and packaging problems and works with trade associations in the electrical, metalworking and packaging materials industries.

PAINTING AND DECORATING CONTRACTORS OF AMERICA, Ed S. Torrence, Secretary, 2625 West Peterson Avenue, Chicago, Illinois 60645

One of the stated objects of this organization is its efforts to protect members and the general public by endeavoring to maintain high standards of workmanship in the painting, decorating, drywall and coatings industries.

The association maintains a Specifications Committee whose purpose is to make studies in connection with the development of standards and specifications relating to painting, decorating, drywall and coatings. This committee has prepared standard specifications as a basis for the proper use and application of material used by the industry. The specifications are most complete and are revised constantly.

The association also promotes and maintains an Apprenticeship Training Committee which prepares, in conjunction with the Brotherhood of Painters, Decorators and Paperhangers, a standard course of training for all industry apprentices.

In cooperation with the National Paint, Varnish and Lacquer Association and the Brotherhood of Painters, the association holds regional journeymen training seminars wherein journeymen learn first hand of the many new materials and methods of application available to the industry. These workshops are built around the subject "Learn More So That You May Earn More."

**PAPER CUP AND CONTAINER INSTITUTE, Robert W. Foster,
Executive Director, 250 Park Avenue, New York, N. Y. 10017**

Membership in the Institute consists of manufacturers of round, nested, paper cups and containers. Shortly after the Institute was established in 1933 a Standards Committee was formed to develop recommended standards for the important factors involving the physical specifications of the finished products. The purposes of these recommended standards were: (1) to guide the industry in the manufacture of cups and containers that conform with the intent and spirit of various laws and codes, (2) to discourage the production of types and sizes of cups and containers that did not conform to the weights and measures regulations and thus injure the reputation of the industry, and (3) to promote dimensional uniformity for their operation in packaging, filling, capping and vending equipment.

In 1941 the National Conference on Weights and Measures adopted a code for measure containers which included the round, nested, paper container. These containers are used as a measure container under this code for the packaging of products such as ice cream, frozen desserts, cottage cheese, sour cream, yogurt and similar commodities when sold by liquid measure. The tolerances established by the measure container code are necessarily stringent and are met by the manufacturers in this industry. The Standards Committee of the Institute, on invitation, served as an advisor and consultant to the National Bureau of Standards which developed this code for National Conference approval.

The Institute Standards Committee, along with other private and public organizations, has helped develop certain sanitation standards which are guides used by the manufacturers of paperboard containers for the packaging of liquid and fatty foods. The Microbiological and Biochemical Center of Syracuse University Research Corporation, in cooperation with Federal, State and local public health agencies, in 1947 published these standards in a Manual of Sanitation Standards of Certain Products of Paper, Paperboard and Molded Pulp. This Manual was revised late in 1964 and continues to be a guide which is used as a minimum sanitation standard for the cup and container industry represented by the Institute.

**PERLITE INSTITUTE, Richard E. Barnes, Managing Director, 45
West 45th Street, New York, N. Y. 10036**

A national and international, nonprofit trade association, this Institute sponsors research leading to standardization of specifications and methods of testing perlite and perlite products. The Institute collects data, initiates and correlates research, and develops specifications and test methods. It cooperates closely with technical and engineering societies, other trade associations, and Government agencies interested in standards.

The Institute publishes "Test Methods and Related Standards" containing test methods for evaluating quality of expanded perlite, and ASTM Specifications applicable to perlite. It also publishes standards for perlite products used in the building, industrial, and horticultural industries.

PHARMACEUTICAL MANUFACTURERS ASSOCIATION, Austin Smith, M. D., President, C. Joseph Stetler, Executive Vice President and General Counsel, 1155 Fifteenth Street, N.W., Washington, D. C. 20005

This Association was composed in 1958 of the drug manufacturers formerly belonging to the American Drug Manufacturers Association and the American Pharmaceutical Manufacturers Association. Scientists of member firms constitute committees which work with the United States Pharmacopoeia and the National Formulary in developing methods of analysis and standards for drugs used by the medical and allied professions. These Association committees also cooperate with the Food and Drug Administration, the National Institute of Health, the Bureau of Narcotics, and other agencies of the Federal Government.

Among other things, the Association encourages high standards of potency, quality, and purity for pharmaceutical and biological products intended for use by the medical and allied professions in the cure, mitigation, treatment, prevention or diagnosis of disease; it assists appropriate scientific and governmental agencies in the establishment of scientific and technical standards for such products. It encourages research in the development of new and better medicinal products and better facilities and methods for the pharmacological and clinical evaluation of medicinal products. It urges efficiency, safety, and better methods in the manufacture, maintenance, packaging, and transportation of medicinal products. It promotes the enactment of uniform and reasonable drug legislation for the protection of public health, and cooperates with regulatory agencies in the reasonable enforcement of such legislation. It disseminates information on governmental regulations and policies and on other subjects of interest to the pharmaceutical industry, and encourages and promotes the development of scientific and technological skills useful in the discovery, evaluation, and production of pharmaceutical and biological products for the cure, mitigation, treatment, prevention, or diagnosis of disease. It cooperates in all lawful ways with professional associations in the health field, other industries, and government authorities in the advancement of medical science, the improvement of public health and the advancement of the pharmaceutical industry.

PHOTOGRAPHIC SOCIETY OF AMERICA, Randolph Wright, Jr., Executive Secretary, 2005 Walnut Street, Philadelphia, Pennsylvania 19103

The Society is a nonprofit organization, international in scope, and devoted to the advancement of photography in all its manifestations. The broad interests of PSA members include a wealth of experience in the manufacture, technology, application, and uses of photographic products of all types. Through its Standards Committee, the diverse viewpoints represented are organized to assist in the formulation of standards. The Society is a member of the United States of America Standards Institute and has representatives in all of the sectional committees on photography, as well as on the Photographic Standards Board. Every effort is made to select representatives who are technically competent and genuinely interested. Each representative is instructed to ascertain the

feelings and attitudes of the Society on important questions of standardization before casting his ballot.

The PSA Standards Committee also aids in the formulation of other useful standards involving such photographic activities as exhibitions, proper lighting of pictures, definitions of terms, and other regulations which contribute to the success of amateur photographic events.

PIPE FABRICATION INSTITUTE, N. F. Young, Executive Secretary, 992 Perry Highway, Pittsburgh, Pa. 15237

The standardization program of this Institute functions through its engineering and metallurgical committees. The standards and technical bulletins emanating from these committees cover the design, fabrication and erection of industrial and high pressure-high temperature piping to meet the most exacting requirements of power plant piping. Through its members, the Institute is officially represented on various code bodies and national engineering societies.

PIPE LINE CONTRACTORS ASSOCIATION, Richard A. Gump, Executive Secretary, 2800 Republic National Bank Building, Dallas, Texas 75201

This Association was organized in the fall of 1947 to serve as a medium for the exchange of information among contractors engaged in the main-line pipe line construction industry. Its purposes are: (1) To make membership in the Association a reasonable assurance to the public of the skill, integrity and responsibility of its members; (2) to maintain the standards of the pipe line contracting business at the level necessitated by its quasi-professional character and to establish members of the Association in the public mind as contractors to fulfill obligations in good faith; (3) to promote more cordial and cooperative relations among pipe line contractors and between those with whom they deal or have contact; (4) to encourage efficiency among pipe line contractors and their employees; (5) to seek correction of injurious, discriminatory or unfair business methods practiced by or against pipe line contractors; and (6) to eliminate as far as possible the occurrence of injury or death to pipe line contracting employees.

Representatives of the Association serve on a Joint Committee which has published a Standard for Welding Pipe Lines and Related Facilities. Representatives of the Association also work with other committees of the American Petroleum Institute and the American Gas Association in an effort to prepare a recommended form of contract and specifications for pipe line construction work.

PORCELAIN ENAMEL INSTITUTE, John C. Oliver, Managing Director, 1900 L Street, N.W., Washington, D. C. 20036

This Institute acts in the capacity of coordinator between standardizing agencies such as the Product Standards Section, National Bureau of Standards; Building Research Advisory Board; American Society for Testing and Materials; Department of Defense; General Services Administration; and appropriate

divisions of manufacturers and suppliers of the porcelain enameling industry.

Highlights of past accomplishments in this field include the following: development of Product Standard PS5-66 Porcelain Enameled Formed Steel Plumbing Fixtures, and Commercial Standard CS115-60 for Glass-Lined Domestic Hot Water Tanks; cooperating with a recent Building Research Advisory Board study of plumbing fixtures; development of approximately ten ASTM Test Methods pertaining to porcelain enamel; and continuous editing and revision of Military and Federal Specifications on products which are finished in porcelain enamel.

In addition to the above standardization work, the organization maintains two full-time Research Associates at the National Bureau of Standards specializing in development of new test methods.

The Institute also cooperates with individual divisions of the industry in preparing and publishing specifications for various porcelain enamel products.

POWDER ACTUATED TOOL MANUFACTURING INSTITUTE,
Alvin G. Lane, Executive Director, 200 College Street, New Haven,
Connecticut 06510

The Institute has prepared a proposed Uniform State Code Relating to Powder Actuated Tools Using Studs, Pins and Fasteners, to serve as a guide to State and other agencies in the issuance of regulations covering the use, operation, and application of powder actuated tools.

A powder actuated tool is a tool which by means of a powder load propels or discharges a stud, pin, or fastener for the purpose of impinging it upon, affixing it to, or penetrating another object or material. It is used mainly in construction and plant maintenance.

A basic feature of the recommended Uniform State Code (which provides for two classifications of the tools, i.e., conventional type and low velocity, piston type) is the provision for training and qualifying powder actuated tool operators. An operator becomes qualified upon successful completion of a prescribed training course and written examination and is issued a card attesting to this training. The Code proposes that no worker be permitted to use the tool without such a card and provides for revocation of the card if the operator fails to comply with the rules for safe operation. The Code also provides for minimum safety design requirements recommended for both classifications of tools.

PRECISION POTENTIOMETER MANUFACTURERS' ASSOCIATION,
R. E. Pritchard, Executive Secretary, 3525 Peterson Road,
Chicago, Illinois 60645

Manufacturers in this trade association produce precision potentiometers and trimmers. A standard nomenclature for wirewound and high resolution potentiometers is available from PPMA. In addition, incoming inspection standards are available covering wirewound precision potentiometers. A similar standard is presently being developed for high resolution precision potentiometers.

PRESSURE SENSITIVE TAPE COUNCIL, Richard G. Breeden, Jr.,
Secretary-Manager, 1201 Waukegan Road, Glenview, Illinois 60025

The Council's Technical Committee has developed a series of recommended "Test Procedures" for determining the various characteristics of pressure sensitive tape such as adhesion, tensile strength, thickness, etc. In addition, it has available laboratory test apparatus for the testing of pressure sensitive materials. The Council publishes an annual "Directory" of all American tape products indicating their principal use and characteristics. It also maintains liaison with Government agencies interested in pressure sensitive tapes.

PRESTRESSED CONCRETE INSTITUTE, Russell J. Hammer-smith, Technical Director, 205 West Wacker Drive, Chicago, Illinois 60606

This Institute, through the activities of its technical and administrative committees, provides standards for the prestressed concrete industry in material, design, and construction specifications; standardized sections; and quality control.

Before the nationally recognized ACI Building Code included a chapter on prestressed concrete in 1963, the Prestressed Concrete Institute published several specifications for industry guidance. "Specifications for Pretensioned Prestressed Concrete (Tentative)" was published in November 1954 and revised in 1957. "Specifications for Post-Tensioned Prestressed Concrete" was published in February 1958. "PCI Standard Building Code for Prestressed Concrete (Tentative)" was published in November 1959 and revised in 1961.

In collaboration with the American Association of State Highway Officials, joint AASHTO-PCI Standards have been published covering the following: (1) Standard Prestressed Concrete Beams for Highway Bridge Spans 30 to 100 Feet; (2) Standard Prestressed Concrete Box Beams for Highway Bridge Spans to 103 Feet; (3) Standard Prestressed Concrete Slabs for Highway Bridge Spans up to 55 Feet; (4) Standard Prestressed Concrete Piles 10", 12", 14", 16", 18", 20", 22", and 24" Square; and (5) Standard Prestressed Concrete Piles 10", 12", 14", 16", 18", 20", 22", and 24" Octagonal.

Other published standards include: (1) the joint AASHTO-PCI inspection manual, "Manual for Inspection of Prestressed Concrete"; (2) the PCI standard, "Prestressed Concrete Channel Girders"; (3) "PCI Standard for Prestressed Concrete Plants"; and (4) the PCI procedure, "Tentative Recommended Practices for Grouting Post-Tensioned Prestressed Concrete."

PULVERIZED LIMESTONE ASSOCIATION, David L. Shank,
Secretary-Treasurer, 325 Delaware Avenue, Buffalo, N.Y. 14202

This Association is composed of companies engaged in manufacturing and selling pulverized limestone products of a minimum fineness of 97 percent, passing through a 325 mesh screen. One of the objects of this organization is to develop high and uniform standards that can be usefully adapted by manufacturers and users of pulverized limestone.

The Association sponsors Research Projects for the use of pulverized limestone in the manufacture of paper, plastics, rubber, paints, floor coverings and other useful applications as an inert filler material.

RACK MANUFACTURER'S INSTITUTE, L. West Shea, Managing Director, 250 Gateway Towers, Pittsburgh, Pennsylvania 15222

This Institute consists of a group of 16 firms located throughout the country which are engaged in the design and manufacture for sale of storage racks.

RMI has been active for many years in the area of standardization within its industry. Its published standards include a Standard Nomenclature for Pallet Stacking Frames, Nomenclature for Drive-in and Drive-thru Pallet Racks, Standard Nomenclature for Pallet Racks, and Minimum Engineering Standards for Industrial Steel Storage Racks.

RAILWAY TIE ASSOCIATION, R. M. Hamilton, Secretary, 1373 Grandview Avenue, Columbus, Ohio 43212

Several of the main objects of this Association are with reference to standardization of cross ties, collection and dissemination of statistics concerning cross ties, proper methods and practices in preventing forest fires, and preservation and conservation of forests and forest products in the several States of the Union.

Through work of its Committee on Specifications and Inspection, the Association at its annual meeting in July 1946 adopted specifications for cross and switch ties, and specifications for narrow-gage cross ties and switch ties. This Association is continuing its efforts in developing additional standards for the products of the industry which it represents.

RAILWAY WHEEL ASSOCIATION, R. L. Wilson, President, 445 North Sacramento Boulevard, Chicago, Illinois 60612

This Association, organized in 1908, includes in its membership every commercial manufacturer of cast iron and cast steel car wheels in the United States and Canada.

The functions of this organization are divided into several primary responsibilities relative to cast car wheels, namely, research related to improvements in chemical, physical, and metallurgical properties of material; inspection and quality control of the manufactured product and the standardization of specifications and inspection methods; and standardization of wheel design.

The Association maintains several standing committees dealing with research projects, wheel design, and specifications. It also cooperates with technical committees of the Association of American Railroads and the American Society for Testing and Materials on standardization matters relating to methods of testing, theory and practice of mounting railroad wheels on axles, and wheel design.

The Association has issued a "Manual of Inspection" to its members, which includes a code of practice covering specifications relative to pouring, annealing, and testing; recommended practices with respect to inspection for the purpose of eliminating any

product which has been found to be imperfect or undesirable; instructions covering association standard forms; and specifications of the Association of American Railroads for cast wheels for locomotives, tenders, and cars.

RECORD INDUSTRY ASSOCIATION OF AMERICA, Henry Brier,
Executive Secretary, One East 57th Street, New York, N. Y. 10022

During 1957 and 1958 the Association adopted frequency response standards and dimensional standards for all types of disk phonograph records intended for home use. Although disk records had been marketed in large quantities since the beginning of the century, this was the first time that recording and manufacturing standards had been codified and adopted by all leading companies. Subsequently, standards for stereophonic disk records, the newest product of the industry, were similarly adopted. In addition to its work with disk records, the Association has also adopted magnetic tape standards.

RED CEDAR SHINGLE AND HANDSPLIT SHAKE BUREAU,
Virgil G. Peterson, Secretary-Manager, 5510 White Building, Seattle,
Washington 98101

At the request of this Bureau, a general conference of representative manufacturers, distributors, and users of red cedar shingles was called in 1931 under the auspices of the National Bureau of Standards, following which there was adopted a Commercial Standard for this commodity. At the request of interested groups, the standard was later revised to include California redwood and tide-water red cypress shingles, and issued as Commercial Standard CS31-33 for Wood Shingles. This standard, which was revised in 1938 and 1952, covers No. 1 grade shingles, and was accepted and approved for publication by the National Bureau of Standards.

In order that interest might be increased in the manufacture, sale, and use of high-grade shingles, and consumers protected on the basis of quality, the Red Cedar Shingle and Handsplit Shake Bureau inaugurated a certification program. In accordance with this program, the Bureau developed a quality label which manufacturers place on bundles of No. 1 grade red cedar shingles with a statement of guarantee that the shingles meet all the quality requirements of the commercial standard. In addition, the Bureau maintains a corps of trained inspectors who visit the plants at frequent, unannounced intervals to check on the quality of shingles. Failure on the part of producers to comply with the requirements of the Commercial Standard results in loss of the right to use the labels until satisfactory adjustment has been made. Labels are also issued and placed on bundles of shingles for No. 2 and No. 3 grades which are indicated in plain figures on the labels, and carry statements that the shingles are guaranteed to meet all quality requirements of the respective grades, as shown in current grading and packing rules of the Red Cedar Shingle and Handsplit Shake Bureau.

In 1955, at the request of this Bureau, similar standards were drawn up for machine-grooved red cedar shakes and rebutted-

rejointed red cedar shingles, designated as CS199-55. These two products are derived from red cedar shingles, and are used for exterior walls of buildings. A similar grademarking and certification program is followed as in the case of red cedar shingles, described above.

REDWOOD INSPECTION SERVICE, Philip T. Farnsworth, Secretary-Treasurer, 617 Montgomery Street, San Francisco, California 94111

In 1961, the Redwood Inspection Service was incorporated as a nonprofit organization for the primary purpose of establishing uniform grades of redwood lumber, preparation and distribution of educational information and publications, consultation with governmental agencies concerning grades and grading of redwood lumber, and supervision of grades and grading of redwood and other species of lumber.

The Service is the rules-promulgating agency for the redwood-softwood lumber industry, and its membership includes some 90 percent of redwood production, the number of members varying between 38 and 45. The rules are suggested by a Grading Committee and authorized by an eleven-member Board of Directors. The Service has in this manner adopted standard specifications for grades, sizes, patterns and grade marks for redwood lumber, planing mill products, special purpose uses including tank stock, stadium seat stock, irrigation material, foundation sills, structural grades, structural glue laminating grades and miscellaneous products including railroad ties, shingles, cooling tower material and handsplit and resawn shakes. It has also adopted official grade marks and shingle and shake labels signifying that products marked or accompanied by a label have been graded in accordance with standard specifications of the Redwood Inspection Service. These marks or labels are applied by qualified graders of member companies or by cooperating grading agencies operating within a relationship established by the American Lumber Standards Committee.

The Service cooperates with other lumber organizations and with the American Lumber Standards Committee in keeping current the American Lumber Standards set forth in Simplified Practice Recommendation R16. The Service's grading rules for redwood lumber are in accordance with these standards and approved by ALSC.

REFRIGERATING ENGINEERS AND TECHNICIANS ASSOCIATION, Emmett T. Quinn, Executive Secretary, 312 San Antonio Road, Arcadia, California 91006

This is an educational, nonprofit association, concerned with furthering the knowledge and training of its members in all phases of air conditioning and refrigeration. There are 40 chapters in the United States conducting air conditioning and refrigeration courses, together with members at large, both United States and foreign.

The Association cooperates in the standardizing activities of other organizations in the refrigeration field, notably the United

States of America Standards Institute. By its representation on USASI sectional committees such as Sectional Committee B53 on Refrigeration Nomenclature, it cooperated in the establishment of several USA Standard Codes.

Besides textbooks and educational literature, members receive the official organ, "RETA Breeze," bimonthly. The Association's textbooks, speaker programs, etc., include presentations on standardization activities, on safety and welfare codes.

RESISTANCE WELDER MANUFACTURERS' ASSOCIATION, R.

Bruce Wall, Secretary, 1900 Arch Street, Philadelphia, Pennsylvania 19103

The development of standards and specifications of this Association is by the Technical Committee, assisted and advised by various subcommittees. RWMA has developed specifications for resistance welding machine: Spot, press, portable, seam, upset butt, flashbutt, etc.

Standard classification of resistance welding electrode alloys has been developed, stating the minimum permissible physical and electrical qualities. Trade names and numbers are identified and classified.

Standards have been developed for spot welding electrode holders, welding electrodes (spot and seam); together with recommended electrode alloys for spot welding of similar and dissimilar metal combinations.

Standard nomenclature and definitions on resistance welding equipment and techniques have been developed. Cooperation of RWMA has assisted in development of National Electric Manufacturers Association standards on Resistance Welding Controls.

RICE MILLERS' ASSOCIATION, J. P. Gaines, Executive Vice President, 1048 Pennsylvania Building, Washington, D. C. 20004

This Association establishes standard contract terms and conditions for trade in rice and rice products. It prescribes standard forms of sales contracts for use in rice trade in the United States, Puerto Rico and export markets. The Association has adopted and uses grade and quality standards for rice of the U. S. Department of Agriculture.

RLM STANDARDS INSTITUTE, J. R. Chambers, President, P. O. Box 754, Meriden, Connecticut 06450

The RLM concept was born in 1919, when a group of lighting manufacturers met with two important, basic objectives: (1) to establish high standards for the design and construction of industrial lighting units; and (2) to simplify the selection of proper equipment by specifiers, dealers and users. Reorganized as the RLM Standards Institute in 1936, this Specification and Certification Program is the oldest of its kind in the lighting industry.

The Institute is a nonprofit organization sponsored by leading lighting equipment manufacturers who, through elected trustees and a Technical Committee, establish quality specifications for industrial lighting. Basic objectives of the Institute as stated in the Articles of Incorporation are: (1) To make, or cause to be

made, and to supervise tests, investigations, experiments and inspections in connection with the manufacture and marketing of lighting equipment, lighting fixtures and pertinent accessories; (2) to formulate, administer and disseminate specifications of standards in design, construction, composition, finish, performance and service of lighting equipment, and to secure compliance with such specifications on the part of the participating manufacturers in the RLM Standards Institute; (3) to issue publications, bulletins, labels, and other printed matter in order to properly inform the public and all others using, specifying, installing or distributing lighting equipment about such tests, investigations, experiments and inspections; and (4) to promote and encourage in the public mind, by publicity, a keener interest in the advantages of modern lighting equipment.

To date, the Institute has published nineteen standards covering fluorescent, incandescent, and mercury lighting units, fluorescent lighting components, and inspection and test procedures for incandescent and fluorescent lighting units.

ROOF DRAINAGE MANUFACTURERS INSTITUTE, S. M. Van Kirk, Managing Director, 22 West Monroe Street, Chicago, Illinois 60603

The standardization and simplification activities of this Institute are carried on by its Technical and Research Committees. The work of these committees in recent years has dealt with the development of a Commercial Standard in lieu of Simplified Practice Recommendations. Commercial Standard CS244-62 Roof Drainage Products, is now under revision and will be released with modifications in the near future.

RUBBER MANUFACTURERS ASSOCIATION, Charles C. Miller, Secretary, 444 Madison Avenue, New York, N. Y. 10022

The Technical Committees of this organization's several product groups collaborate with Federal, State and municipal agencies, domestic and foreign associations, and individual commercial users in the development of new or improved specifications for all kinds of rubber products. Emphasis is placed on the practicality of physical requirements and minimization of sizes and types of products, endeavoring to achieve the utmost simplification of sizes and types, with greatest potential economic benefit to producers, wholesalers, retailers, and consumers in processing, distribution, and inventory costs. Most efficient use of raw materials and labor also is an objective.

Products covered by these standardization activities are many and varied, and include both military and civilian requirements. Typical are motor vehicle and agricultural tires; transmission, conveyor and elevator belts; suction, discharge, air, steam, gasoline and fire hose; rubber-covered rolls; molded and extruded rubber products; sheet packing, mats and matting; O-rings and shaft seals; rubber protective and rubber-and-canvas footwear; drug-gists' sundries; surgical, hospital, and industrial rubber gloves, tubing, sheeting, and other items; sponge rubber and foam latex mattresses, pillows, cushions, furniture upholstery, carpet and rug

underlays; rubber heels, soling materials, and other rubber shoe products; vinyl and rubber tile, sheet flooring and cove base; natural-rubber-type descriptions; and standard samples.

RUBBER RECLAIMERS ASSOCIATION, C. T. Jansen, Secretary, 101 West 31st Street, New York, N. Y. 10001

The Association publishes specifications on scrap rubber. These deal with grading, sorting, packing, and shipping and are designed to protect both the scrap-rubber supplier and the reclaimer. These specifications are used throughout the United States and Canada as well as in many foreign countries. The Association also publishes uniform conditions for the testing of reclaimed rubber.

SAFE MANUFACTURERS NATIONAL ASSOCIATION, David Laine, Executive Secretary, 366 Madison Avenue, New York, N. Y. 10017

This Association has formulated and adopted specifications for fire-insulated safes, fire-insulated cabinets, fire-insulated filing devices, fire-insulated vault doors, file-storage-room doors, burglary-resistive chests, and robbery-resistive containers. The test requirements for fire-insulated safes are essentially identical to those which have been established by the National Bureau of Standards and Underwriters' Laboratories.

To safeguard the public against unwarranted claims as to the fire resistance and/or burglary resistance of products of the fire-resistive safe industry, members of the Association use labels on their products. The label on a fire-insulated product is a certification by the manufacturer that the design has been shown by test to comply with the specification and rating indicated on the label, and that the product has been shown by the manufacturer's inspection-in-course-of-manufacture to warrant the label attached thereto. Fire-resistance ratings are stated as the number of hours that the product was subjected to American standard time-temperature curve conditions, in a furnace, without failure. The label on a burglary or robbery-resistive product indicates compliance with the SMNA construction specification for the type (group) indicated on the label.

SALT INSTITUTE, Frank J. Madden, Managing Director, 33 North La Salle Street, Chicago, Illinois 60602

In the early 1920's, salt could be purchased in packages of many sizes; but in 1927, this organization, at the invitation of the U. S. Department of Commerce, recommended a list of salt packages which could be eliminated and Simplified Practice Recommendation R70 was issued on April 13, 1927. Since then, the list of recommended packages has been revised several times with the result that subsequent editions of R70 were issued in 1941, 1942, 1946, and 1954. A separate list of packages applicable to the Pacific coast appeared in R70-41 for the first time.

Although the number of packages available to the public has at all times been entirely adequate to take care of needs, it has been reduced considerably over a period of time. By way of illustration, at the time the first Standardization Committee of this organ-

ization went to work on the problem of decreasing the number of packages, there were 18 sizes. Now they are available only in 5-lb. and 10-lb. sizes of rock, high grade (popcorn), and table salt.

Similarly, the sizes of square cartons (8, running from 1 lb. to 5 lb.) have been reduced to 2; the number of large sizes of bags of cotton and burlap (15, running from 25 lb. to 224 lb.) has been decreased considerably, the heavy-to-handle sizes, in particular, being eliminated; barrels in 280-lb. and 320-lb. sizes have been dropped entirely, etc.

On the other hand, packages which have become necessary over the years have been added; for example, paper bags for pressed water-softener salt and mineralized salt.

SCIENTIFIC APPARATUS MAKERS ASSOCIATION, Kenneth Andersen, Executive Vice President, 20 North Wacker Drive, Chicago, Illinois 60606

Long active in the field of technical standardization, this organization has published 21 recommended standards covering process control instrumentation, temperature measurement, load cells, rubber and plastic tubing, cords and plugs for electrical instruments, and instrument nameplate dimensions. Technical standards are prepared in accordance with "Standards Procedure for Use in Establishing SAMA Standards."

Considerable assistance is given to the Department of Defense and General Services Administration in preparing and revising purchase specifications for all kinds of laboratory apparatus and instruments.

The Association sponsors United States of America Standards Institute Sectional Committee C100, Electrical Reference Instruments and Devices. It participates in many other standardization projects of USASI (including those of the International Organization for Standardization) through official representation on Boards and Committees. It cooperates in similar fashion on standardization projects of the Instrument Society of America, American Society of Mechanical Engineers, American Society for Testing and Materials, Institute of Electrical and Electronics Engineers, American Petroleum Institute, National Bureau of Standards, and National Conference of Standards Laboratories.

A recommended standard identification and location of instrument and control connections for power boilers was developed jointly with the American Boiler Manufacturers Association.

SCREEN MANUFACTURERS ASSOCIATION, George M. Schlosser, Executive Secretary and General Counsel, 110 North Wacker Drive, Chicago, Illinois 60606

This is a trade association composed of prime manufacturers of screens such as metal frame window screens, porch screens, patio screens, swimming pool screens, and screen doors.

The Association developed and proposed to the Commodity Standards Division (now Product Standards Section), National Bureau of Standards, suggested Commercial Standards for Aluminum Tubular Frame Screens and for Aluminum Tension Window Screens. These proposals resulted in the ultimate publication of

Commercial Standards CS240-61 for Aluminum Tubular Frame Screens and CS241-61 for Aluminum Tension Window Screens. The Association continues to work with the National Bureau of Standards regarding certain proposed amendments to CS240-61.

The Screen Manufacturers Association has also developed and published Specifications for Aluminum Sliding Screen Doors.

SOAP AND DETERGENT ASSOCIATION, Robert C. Singer, Public Relations Director, 295 Madison Avenue, New York, N. Y. 10017

This Association, through its Technical and Materials Division, carries on the determination of facts and finding of solutions for problems of sewage treatment and water supply attributed to the presence of synthetic detergents. In the course of this work, the Association has acted as the coordinating agency in the development of a test procedure and standards for the determination of the biodegradability of alkyl benzene sulfonate and linear alkylate sulfonate.

The T&M Division's Subcommittee on Biodegradation Test Methods has underway a continuing program to review and evaluate existing procedures and to develop, when necessary, new methods and standards to meet the needs of the industry in this country.

SOCIETY OF AERONAUTICAL WEIGHT ENGINEERS, N. J. Carraway, Executive Secretary, 6151 Chadwick Avenue, San Diego, California 92114

This Society, organized in 1939, has contributed its services toward the accomplishment of: (1) Standardization of A.N. Forms; (2) standardization of Weighing Procedure; (3) standardization of Method of Determining Trapped Fuel and Oil; (4) development of Detail Contractor Fabricated Weight Statement; (5) development of Gun Turret Weight Statement; (6) development of Accessory Weight Program; (7) sponsorship of Exchange of Weight Data; (8) exchange between airline members of information concerning Weight Reduction on Airline Equipment; and (9) the collection of standard weights of raw stock and aircraft hardware together with engineering data into the S.A.W.E. Weight Handbook.

The S.A.W.E. Weight Handbook, Volume I (copyright 1944) gives weight data for sheet stock; bar stock; tubing; flexible conduit; cable; chains; woods; gases; carpeting; leather; rubber; rope; gaskets; plastics; AN, NAS, and MS standard parts such as nuts, bolts, washers, pins, receptacles; and hundreds of other items used every day by manufacturers in the construction of aircraft and missiles. Also included are equations for the determination of areas, volumes, and weight moments of inertia.

SOCIETY OF AUTOMOTIVE ENGINEERS, Joseph Gilbert, Secretary and General Manager, 485 Lexington Avenue, New York, N. Y. 10017

Standardization has been an important activity of this Society from its very beginning. It now carries on technical standardiza-

tion work for the motor vehicle, aircraft, airline, space vehicles, farm tractor, earth-moving, and roadbuilding machinery, and other manufacturing industries using internal combustion engines. With the exception of standards for the aerospace industry, which are published in looseleaf form, the standards of the Society are published annually in the SAE Handbook. The Society's standardization work is under the general direction of the SAE Technical Board which organizes such technical committees as may be necessary to carry on the work. Most of these technical committees are of a permanent nature, but some are appointed to handle specific projects and are disbanded upon their completion. The Society's standards and technical committee activities also include active advisory cooperation with the Armed Forces and numerous other Federal and State government agencies. The SAE is active in international standardization and sponsors several U. S. National Committees for ISO projects under the auspices of the United States of America Standards Institute. In addition, many SAE standards have found international usage by being voluntarily adopted by foreign industry or government people.

The SAE standardization activity began in 1902 with the adoption of standards by the National Association of Automobile Manufacturers that was organized in 1900. In 1903, the Association of Licensed Automobile Manufacturers was organized by manufacturers licensed under the Selden Patent. In 1910, the Society took over from the Mechanical Branch of the ALAM its work of preparing technical data and appointed the first Standards Committee in the automotive industry. During the years immediately following, other industries began to use internal combustion engines more widely, and it became evident that the SAE was the logical body in which to centralize all such activities. In 1917, the American Society of Aeronautics Engineers and the Society of Tractor Engineers merged with the SAE and soon thereafter the National Association of Engine and Boat Manufacturers and the National Gas Engine Association merged their engineering and standardization work in the SAE, and the Society of Automobile Engineers then became the Society of Automotive Engineers, Inc. In 1926, the Society initiated standardization in automotive production engineering, and in 1931 adopted the first standardization in the motor transport field.

In cooperation with the American Petroleum Institute, the SAE sustains the Coordinating Research Council. This Council was set up in 1942 to conduct cooperative research, standardization, and similar work aimed at mating fuels and lubricants to their power plants.

All standards, specifications, and reports developed by the Society are made available for industry, government or other usage on a voluntary basis. Frequent checks are made to determine use of each document. Unused documents are canceled. The SAE has been important in aiding government agencies, both civil and defense, in the development of sound technical documents. SAE standards are recognized in government publications as sources for establishing minimum technical requirements in areas where government regulatory control has been established.

SOCIETY OF MOTION PICTURE AND TELEVISION ENGINEERS, Lewis A. Bernhard, Jr., Executive Secretary, 9 East 41st Street, New York, N. Y. 10017

The Society of Motion Picture and Television Engineers is a nonprofit organization concerned with the engineering aspects of motion pictures, television, instrumentation, high-speed photography, and the allied arts and sciences. Founded in 1916 to develop technical standards for motion picture engineering, it has expanded to include television and the areas mentioned above. As sponsor of two USASI Sectional Committees, PH22 Motion Pictures, and C98 Combined Visual-Aural Magnetic Recording for Television, SMPTE is responsible for generating and maintaining standards for these disciplines.

As well as the Standard Program, the Society fulfills its objectives by: (a) Presenting technical papers at monthly meetings held by its 13 chapters; (b) arranging semiannual week-long technical conferences with technical papers sessions and equipment exhibits; (c) publishing a monthly technical journal; and (d) manufacturing and distributing technical test film for motion pictures and television.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS, M. H. Gluntz, Secretary, 74 Trinity Place, New York, N. Y. 10006

This Society, in cooperation with other interested organizations, takes an active part in the establishment of standards relating to the design, construction, and operation of merchant marine ships, their components, and related oceanographic activity. Through representation on various United States of America Standards Institute committees, it assists in the development of standards for gears; piping, flanges and fittings; bolts, nuts and fasteners; surface qualities; refrigeration on shipboard; freight containers; reactor safety and apparatus; drafting practice; and packaging and handling.

SNAME also participates with working groups of the International Standards Organization on Shipbuilding Details and Light Metals and Alloys.

In addition, the Society maintains internationally recognized codes and standards for Selection of Wrought Aluminum Alloys for Ship Structures; Aluminum Alloy Tee and Angle Shapes for Ship Structures; Shipboard Hull Vibration Measurements; Ship Equipment Installation and Shop Tests; Safety Considerations for Nuclear Power Plants on Merchant Ships; Ship Standardization, Economy and Endurance, Maneuvering and Special Tests, and Instruments and Apparatus Trials; Lifeboats; and Hull and Deck Paints.

SOCIETY FOR NONDESTRUCTIVE TESTING, Philip D. Johnson, Managing Director, 914 Chicago Avenue, Evanston, Illinois 60202

The Society has a membership of just over 4500 within some 51 local sections. The sections meet monthly and the Society sponsors two national conventions annually, with its Annual Business Meeting held during the Fall National Convention.

The Society has issued several Acceptance Standards in the

Ultrasonic Testing of Steel and Aluminum, and is currently engaged in a study of Personnel Qualifications. In addition, the Society is devoted to education and research in the field of techniques in the nondestructive testing (materials evaluation) of materials, parts and components, employing mainly the following methods: penetrating radiation, sonics and ultrasonics, magnetic particle and penetrants, eddy current, gaging, infrared and thermal, pressure and proof loading, and many electrical tests. The Society publishes a monthly journal called "Materials Evaluation."

SOCIETY OF PLASTICS ENGINEERS, Colin C. Campbell, Executive Secretary, 65 Prospect Street, Stamford, Connecticut 06902

Founded in 1942, this is a professional society of plastics scientists, engineers, educators, students, and others interested in the design, development, production, and utilization of plastics materials, products, and equipment. The Society cooperates with other organizations in the development of standards for plastics, and is active on its own in areas of plastics standardization not covered by other organizations or covered to only a limited extent on special items as follows: (a) Developing methods to obtain engineering design criteria; (b) developing methods to evaluate the engineering characteristics of processing equipment; (c) developing a comprehensive classified index of plastics standards; and (d) educating those active or interested in plastics regarding the interpretation, proper use, and knowledge of standards. The Society's standardization activities are administered by the Engineering Standards Committee, a standing committee.

SOCIETY OF THE PLASTICS INDUSTRY, William T. Cruse, Executive Vice President, 250 Park Avenue, New York, N. Y. 10017

This is a trade and technical society of over 1200 companies and 1400 individuals in all branches of the plastics industry interested in quality standards, research, uniform accounting, traffic rates, wage rate surveys, tariffs, codes, public relations, informative labeling, safety, fire prevention, food packaging, etc.

SPI runs a number of industry conferences each year and sponsors the National Plastics Exposition every 2½ years, usually alternating between New York City and Chicago.

The companies making up the membership of this Society are: injection, compression, and transfer molders; laminators; extruders; fabricators; calenderers; printers; embossers; reinforced plastics processors; raw material suppliers; machinery and equipment manufacturers; tool, die, and mold makers, research, development, and testing laboratories.

The Society's members are located throughout the United States, Canada, and 28 other countries. Branch offices are maintained in Canada at 660Z Eglinton Avenue East, Toronto 17, Ontario, and Los Angeles at 611 South Catalina Street.

For years SPI has worked closely with the U. S. Department of Commerce through the National Bureau of Standards toward the development of voluntary Commercial Standards on plastic products. The cooperative efforts of companies in the plastics industry, the Society, and the National Bureau of Standards have

proved highly successful. As a result, these industry standards represent the largest number of voluntary Commercial Standards prepared by any trade association through the Department of Commerce.

So far, voluntary Commercial Standards have been published by the Department of Commerce on the following plastics products: Polyvinyl Chloride (PVC) Plastic Drain, Waste and Vent Pipe and Fittings; Acrylonitrile-Butadiene-Styrene (ABS) Plastic Drain, Waste and Vent Pipe and Fittings; TFE-Fluorocarbon (Polytetrafluoroethylene) Resin Molded Basic Shapes; Polyvinyl Chloride (PVC) Plastic Pipe; Polyethylene (PE) Plastic Pipe; Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe; TFE-Fluorocarbon (Polytetrafluoroethylene) Resin Electrical Insulating Tubing; TFE-Fluorocarbon (Polytetrafluoroethylene) Resin Sheet; TFE-Fluorocarbon (Polytetrafluoroethylene) Resin Flexible Hose (Wire Braid Reinforced), Vinyl-Metal Laminates; Polyethylene Sheeting (Construction, Industrial & Agricultural Applications); Vinyl Plastic Weatherstrip; Styrene Rubber Plastic Sewer and Drain Pipe and Fittings; Rigid Unplasticized Polyvinyl Chloride Pipe; Flexible Polyethylene Plastic Pipe; Polyethylene Film; Gel-Coated Glass-Fiber Reinforced Polyester Resin Shower Receptors; Gel-Coated Glass-Fiber Reinforced Resin Bathtubs; Rigid ABS Plastic Pipe (IPS Dimensions); Glass-Fiber Reinforced Polyester Corrugated Structural Plastics Panels; Melamine Dinnerware (Alpha-Cellulose-Filled) for Household Use; Vinyl Chloride Plastics Garden Hose; Solvent Welded (SWP Size) Cellulose-Acetate Butyrate Pipe; Rigid Polyvinyl Chloride Sheets; General Purpose Vinyl Plastic Film; Heavy-Duty Alpha-Cellulose Filled Melamine Tableware; Polystyrene Plastic Wall Tiles, and Adhesives for their Application.

In addition, SPI Committees are working on the preparation of other standards for plastics products for submission to the National Bureau of Standards which are intended to become Commercial Standards.

SOUTHERN CYPRESS MANUFACTURERS ASSOCIATION, J. A. Prestridge, Secretary-Manager, P. O. Box 16413, Jacksonville, Florida 32216

This Association has formulated and adopted standard specifications for grades of tidewater red cypress which are in conformity with American Lumber Standards as set forth in Simplified Practice Recommendation R16-53 and Commercial Standard CS92-41 for cedar cypress, and redwood tank-stock lumber, published by the National Bureau of Standards.

Recognizing the need for uniform marking and authoritative supervision of the marking of standard grades of red cypress lumber, this Association has adopted standard grade marks. The insignia "SCMA" is the property of the Southern Cypress Manufacturers Association. Only licensed inspectors of this Association or competent inspectors or manufacturers authorized by the Association to officially grademark cypress, are permitted to place this mark on lumber. Lumber bearing this symbol is officially grademarked. The appearance of official marks on planing mill products such as flooring, ceiling, bevel siding, drop siding, etc.,

indicate an official grademark for the particular product of the planing mill.

SOUTHERN HARDWOOD LUMBER MANUFACTURERS ASSOCIATION, George C. Romeiser, Executive Vice President, Sterick Building, Memphis, Tennessee 38103

Southern hardwoods are graded under the rules of the National Hardwood Lumber Association, as are all hardwoods manufactured in the United States and Canada. This organization cooperates with the National Hardwood Lumber Association in grade standardization of hardwood lumber; also with Government agencies and all lumber associations in the development of American Lumber Standards fostered by the Department of Commerce.

This organization has also cooperated with the National Oak Flooring Manufacturers Association, and the Hardwood Dimension Manufacturers Association, in formulating Commercial Standards for flooring, trim, paneling, etc. These standards have been issued by the National Bureau of Standards, U. S. Department of Commerce.

SOUTHERN INDUSTRIAL DISTRIBUTORS' ASSOCIATION, George C. Spence, Secretary-Treasurer, 1393 Peachtree Street, N.E., Atlanta, Georgia 30309

As an organization of distributors, this Association participates in standardization projects carried out by industry in general, and cooperates in the preparation and revision of Simplified Practice Recommendations published by the National Bureau of Standards covering standard sizes of wrought iron and wrought steel pipe, valves, and fittings; standard packaging of carriage, machine, and lag bolts; and standard sizes of hacksaw blades.

This Association is represented on the United States of America Standards Institute Sectional Committee on Standardization of Gears, which developed the USA Standard for Spur Gear Tooth Form (B6.1-1932), and the USA Recommended Practice for Gear Materials and Blanks (B6.2-1933).

SOUTHERN PINE INSPECTION BUREAU, A. S. Boisfontaine, Secretary-Manager, National Bank of Commerce Building, New Orleans, Louisiana 70112

This Bureau is an autonomous agency of the Southern Pine Association and is considered the recognized organization in the southern pine industry for the formulation and maintenance of grading standards. Since 1940, the Southern Pine Inspection Bureau has carried on a standardization program in developing grading rules for southern pine lumber carried on for more than 25 years previously by the Southern Pine Association. These rules are in conformity with American Lumber Standards as set forth in the current edition of Simplified Practice Recommendation R16, published by the National Bureau of Standards.

The Southern Pine Inspection Bureau took an active part in the formulation of these national standards and has direct representation on the American Lumber Standards Committee. This Bureau

also is officially represented on the Technical Committee on Timber of the American Society for Testing and Materials with reference to the preparation of standard specifications for timber and timber products.

The Bureau's functions are to maintain standards of size and definite grade classifications, as reflected in its published grading and inspection rules, for the benefit of the lumber-using public and of the industry, and to provide competent and adequate inspection facilities. These inspection facilities are universally regarded as fair and impartial, and are used not only as a means of adjudicating disputes as to grades between buyers and sellers but also for the certification of southern pine lumber before shipment from the mill. The grading and manufacture of subscribers to the Bureau are under the supervision of Bureau inspectors, and those mills which prove their efficiency in grading and agree to maintain the established standards of size and grade are licensed to grademark their lumber with a Bureau mark symbolizing such supervision and efficiency.

SPECIAL LIBRARIES ASSOCIATION, Bill M. Woods, Executive Director, 31 East 10th Street, New York, N. Y. 10003

This international professional society of special librarians and information specialists published in December 1964 its first set of criteria entitled "Objectives and Standards for Special Libraries." This 10-page document sets forth standards for objectives, staff, collection, services, physical facilities, and budget for special libraries, and includes an appendix listing specifications for stack and shelf areas, general space requirements, and illumination. At present, work is underway to supplement these standards with profiles describing desirable practices in six different prototype libraries.

The Association also participates in the work of a number of United States of America Standards Institute Sectional Committees: Z39 Library Work and Documentation; Z84 Glossary of Environmental Terminology; Z85 Library Equipment and Supplies; PH5 Photographic Reproduction of Documents; and PH5-3 Documents Readable without Optical Devices. It is also represented on Library Technology Project Committees developing standards for library binding, equipment, and supplies. SLA's own Professional Standards Committee has a Subcommittee on a Code of Ethics.

SPECIALTY PAPER AND BOARD AFFILIATES, George V. Johnson, Secretary-Treasurer, 122 East 42nd Street, New York, N. Y. 10017

This organization is a Division of the American Paper and Pulp Association. Within this framework, there is the Plastics Extrusion Coaters Group, which is active in standardization. Its Technical Committee has developed standards for Polyethylene Extrusion Coating Weight, WVTR Test Procedure, Slip, and is currently working on a number of others including Gloss Determination, Glueability, and Indexes of Extrudability.

SPORTING ARMS AND AMMUNITION MANUFACTURERS' INSTITUTE, Harry L. Hampton, Secretary, 420 Lexington Avenue, New York, N. Y. 10017

Two committees of the Institute carry on simplification and standardization activities for the industry represented by this trade association. The Simplified Practice Committee, in cooperation with the National Bureau of Standards, initiated the movement which established Simplified Practice Recommendation R31 covering loaded shotshells currently in general demand. A similar program developed Simplified Practice Recommendation R62 for metallic cartridges. Both recommendations have been revised from time-to-time to reflect changes in shooters' preferences. This has been done in cooperation with the Standing Committee representing trade and distribution interests and consumers, under auspices of the Commodity Standards Division (now Product Standards Section), National Bureau of Standards, U. S. Department of Commerce.

SAAMI's Technical Committee activities relating to standardization are varied. This committee maintains supervision of preparation and publication of data sheets presenting maximum cartridge and shell measurements and minimum chamber dimensions for sporting firearms in which these shells and cartridges are used. This committee establishes definitive proof loads recommended for factory testing of U. S.-made sporting firearms, thus assuring greater safety to the users of such arms. The Technical Committee also maintains liaison with the Department of Defense in relation to manufacturing, testing and performance specifications of commercial ammunition purchased by the Government.

SPORTS CAR CLUB OF AMERICA, John M. Bishop, Executive Director, P. O. Box 791, Westport, Connecticut 06881

This is a nonprofit organization with approximately 13,000 members, founded in 1944 and incorporated in the State of Connecticut. The Club promotes national and regional races and sponsors rallies (precision driving tests over a given route at an exact speed), gymkhanas (intricate driving maneuvers in a cleared area), concours d'elegance (rating cars by a correlation of age, condition and equipment of the vehicle), and numerous international events and world championship races.

SCCA has developed safety standards for competitions and standards and procedures for speed events, for automobiles which may take part in events, for issuance of competition licenses, and for the organization and conduct of its business. These standards and procedures are set forth in its publications: "Production Car Specifications"; "General Competition Rules"; and "Summary of SCCA Policies and Operating Procedures."

In addition, SCCA sponsors United States of America Standards Institute Sectional Committee Z90, Vehicular Head Protection. This committee is concerned with safety requirements for head protection for automobile drivers engaged in high hazard activities or occupations, as well as crash helmets for motorcyclists. Standard Z90.1-1966, developed by this committee, was recently issued.

**SPRING MANUFACTURERS INSTITUTE, George E. Underwood,
Secretary, 81 Main Street, Bristol, Connecticut 06010**

An association of precision mechanical spring manufacturers, this Institute first developed standards for compression, extension, and torsion springs in 1949. Revisions were made in 1959 and 1963, with standards for flat springs being added in 1963.

The purpose of these standards is twofold: They give the user or customer design information, and they serve both the producer and user by presenting a common denominator for specifications, tolerances, and terminology.

**STANDARDS ENGINEERS SOCIETY, C. Euffa, Assistant Secretary,
170 Livingston Avenue, New Providence, New Jersey 07974**

This is a professional technical society of standards engineers founded in 1947, incorporated in 1956, and currently consisting of some 1500 individual members organized in 20 local sections throughout the United States, Canada and India. The objectives of this association are: (1) To provide a forum for the interchange of information on standardization and standardization methods. This forum is provided by meetings at the local and national level; and by the publications of the Society—a monthly magazine "Standards Engineering" and an annual "Proceedings"; (2) to further standardization as a means of enhancing general welfare; (3) to promote knowledge and use of approved standards; (4) to encourage additions to the literature of standardization; and (5) to stimulate education in standardization at the collegiate level. The Society recognizes accomplishments in standards work by appropriate awards and by a membership structure which includes the grade of Fellow and Honorary Life Fellow.

**STEEL BAR MILLS ASSOCIATION, W. H. Jacobs, Executive Vice
President, 38 South Dearborn Street, Chicago, Illinois 60603**

This Association, founded as a voluntary trade association in 1911, had as a major initial interest the development of a standard for rail steel concrete reinforcement bars.

Through the guidance of American Society for Testing and Materials Committee A-1 on Steel, Subcommittee V, Steel Reinforcement Bars, and through sponsorship of an investigation by Purdue University, an ASTM A 16 Standard Specification for Rail Steel Bars for Concrete Reinforcement was established in 1913. Through the years, ten revisions have been made through the same agency to comply with changes in steel manufacture and usage. In 1965 an additional standard, A 61-65 Deformed Rail Steel Bars for Concrete Reinforcement with 60,000 psi Minimum Yield Strength, was also established.

With the guidance of ASTM Committee A-1, Subcommittee XV Bar Steels, a standard, A 499-64 Standard Specification for Hot-Rolled Rail Carbon Steel Bars and Shapes, was established in 1964.

Through cooperation with the Commodity Standards Division (now Product Standards Section), National Bureau of Standards, there was established in 1930 a Simplified Practice Recommendation R26-30 Steel Reinforcing Bars. The recommendation was

revised in 1930, 1942 and reconfirmed in 1950. Also, in 1948 there was established Commercial Standard CS150 Hot-Rolled Rail Steel Bars, which in 1963 was revised as CS150-63 to comply with changed practice in production and use. Similarly in 1951, Commercial Standard CS184-51 Steel Fence Posts—Field and Line Types, was published.

Through participation in the activities of United States of America Standards Institute Sectional Committee A59, a USA Standard for Reinforced Gypsum Concrete, A59.1-1954, was established December 29, 1954. Also, work with United States of America Standards Institute Sectional Committee A122 resulted in approval on April 9, 1965 of USA Standard A122.1-1965 Vermiculite Concrete Roofs and Slabs-on Grade.

STEEL DECK INSTITUTE, Bert M. Cohn, Secretary, 53 West Jackson Boulevard, Chicago, Illinois 60604

The Institute was formed in 1939 as a nonprofit association of manufacturers of steel roof deck for the following purposes: To formulate technical recommendations for the improvement of metal roof deck construction and the development and recommendations of Standard Design Procedures; to provide test data for public distribution on all subjects pertaining to metal roof deck; to promote proper building regulations; and to disseminate information relative to the proper use of metal roof deck.

The Institute's Technical Committee, appointed from the staff of its membership, studies and resolves a large variety of technical problems, analyzing and evaluating existing and new methods to assure safe construction.

The Institute has carried on a variety of research work suggested by current conditions, such as fire tests (conducted at Underwriters' Laboratories, Inc., and Factory Mutual Laboratories); vapor barrier research (Pennsylvania State College); wind uplift resistance; and insurance rate treatment and classification.

"A Code of Recommended Standard Practices" and basic design specifications are published as part of Sweet's Catalog File.

STEEL DOOR INSTITUTE, Allen P. Wherry, Executive Secretary, Thomas Associates, Inc., 2130 Keith Building, Cleveland, Ohio 44115

The standardization and simplification activities of this Institute are carried on by its Technical Committee. The work of the Technical Committee has been confined to the development of commercial standards for the products of the industry and the development of standardized mounting dimensions for hardware used in conjunction with steel doors. Four Commercial Standards have been issued: CS211-57 covering Flush-Type Interior Steel Doors and Frames; CS212-57 covering Steel Sliding Closet Door and Frame Units; CS213-57 covering Steel Knockdown Sliding Closet Door Units (for Wood Frame Installation); and CS242-62 covering Standard Stock Commercial 1¾ inch Thick Steel Doors and Frames. Currently, the Technical Committee is working with the builders' hardware manufacturers, the National Builders' Hardware Association, and the United States of America Standards

Institute in the development of USA Standards covering the mounting dimensions of cylindrical and mortise locks and flush bolts. The Institute is represented on one USASI Sectional Committee.

STEEL FOUNDERS' SOCIETY OF AMERICA, F. Kermit Donaldson, Executive Vice President, 606 Terminal Tower, Cleveland, Ohio 44113

The Society has issued a Recommended Minimum Standard for Commercial Carbon Steel Castings, and tentative specifications for steel foundry raw materials covering: (1) Western Bentonite, (2) Gelatinized Cereal Binder, (3) Zircon Sand and Flour, (4) Washed and Dried Sand, (5) Crude Sand, (6) Forsterite and/or Olivine Aggregate and Flour, (7) Cast Steel Abrasives, (8) Malleable Iron Abrasives, (9) Moldable Exothermic Pad Materials, and (10) Exothermic Materials for Molded Exothermic Sleeves. The Specifications Committee has other raw material specifications in process. The Society is represented on specification committees of other organizations, and cooperates particularly with technical committees of the American Society for Testing and Materials in the development of standards and methods of test for steel and steel castings, metallography, radiographic and magnetic particle testing, and other matters of interest.

STEEL JOIST INSTITUTE, C. H. Luedeman, Managing Director, 1346 Connecticut Avenue, N.W., Washington, D. C. 20036

This Institute is a nonprofit organization of manufacturers actively engaged in the fabrication and distribution of open web steel joists. It was organized in 1928 to place the industry on a sound engineering basis. Its objectives are to establish and standardize methods of design and construction for open web steel joists, to provide test and research data for public dissemination, to assist in the development of appropriate building code regulations, and to publish information relative to the proper use of steel joists in the interest of safety and the public welfare.

The Institute's first standard specification was adopted in 1928 and its first load table was adopted the following year. Its current Standard Specifications and Load Tables for Open Web Steel Joists, comprising the J- and H-Series, the LA-Series and the LH-Series has become a recognized industry standard.

STEEL SCAFFOLDING AND SHORING INSTITUTE, Thomas Associates, Inc., Managing Director, 2130 Keith Building, Cleveland, Ohio 44115

This Institute, founded in 1960, includes manufacturers of steel scaffolding and shoring. SSSI establishes recommended criteria and inspection procedures for the proper and safe use of steel scaffolding and shoring to support framework in concrete construction. Its standardization activities have involved attempts to obtain standardization of safety requirements in various State, city, and Federal codes. The Institute has prepared and distributed Recommended Safety Rules for Steel Scaffolding and Steel Shoring, as well as a Recommended Safety Code for Vertical Shor-

ing. In addition, SSSI works closely with United States of America Standards Institute Sectional Committee A10 in developing a revised safety code for the construction industry as regards scaffolding.

STEEL SHIPPING CONTAINER INSTITUTE, Livingston Keplinger, President, 600 Fifth Avenue, New York, N. Y. 10020

The Institute is a national trade association representing manufacturers of steel drums and pails. It initiated cooperative efforts with customer industries to develop recommended standard specifications for all types of containers made according to certain requirements of either the Bureau of Explosives or of the Uniform Freight Classification and of the National Motor Freight Classification.

The purpose of these specifications, which are gaining wide acceptance here and abroad, is to reduce wide variations in container design and to facilitate filling, handling, and shipping.

Joint efforts with customer industry standards groups and the Government have produced recommended standard specifications for 19 different types of steel shipping containers. Ten of these specifications were submitted to the United States of America Standards Institute for publication as USA Standards, and the Steel Shipping Container Institute has been designated proprietary sponsor for these standards.

Copies of steel shipping container specifications, other than USA Standards, are available from the Institute.

STEEL STRUCTURES PAINTING COUNCIL, Mrs. Kittie Condiff, Executive Secretary, 4400 Fifth Avenue, Pittsburgh, Pennsylvania 15213

This Council was established in 1950 to fill a vital need for impartial research, specifications and information on the protection of steel by paints and coatings. Many organizations, recognizing the work of the Council, have become supporting members, and have made available personnel, funds, or facilities to further the Council program.

At the time of its organization, the Council stated these objectives: (1) To determine and outline the best methods that have been developed up to the present time for cleaning and painting steel; (2) to issue specifications covering practical and economical methods of surface preparation and painting of steel structures; (3) to provide long-range research programs involving field and laboratory work and to evaluate various methods and coatings and costs thereof, to prevent or reduce corrosion on steel structures; and (4) to issue periodic recommendations for further improving the effectiveness and economy of the protection of steel structures.

The SSPC has issued the Steel Structures Painting Manual, which has won international acceptance among leading steel and paint manufacturers as well as contractors and companies fabricating and using steel. Volume 1, "Good Painting Practice," is an encyclopedia-type manual providing industry with a comprehensive guide for the cleaning and painting of steel structures. Volume 2, "Systems and Specifications," contains all of the specifications issued by the Council, including surface preparation,

pretreatment, paint application, paints and paint systems.

The Council also carries out a long-range research and testing program.

STEEL TANK INSTITUTE, Allan R. Smith, Executive Secretary, 120 South LaSalle Street, Chicago, Illinois 60603

This Institute, founded in 1916, consists of manufacturers of non-pressure storage tanks for petroleum products and truck tanks. The Institute publishes Midwest 56 Standard for Underground Gasoline Tanks, which has been adopted by the United States of America Standards Institute as Standard B90.1-1963.

The Institute was instrumental in the development of Commercial Standard CS177 Septic Tanks, subsequently endorsed by the Underwriters' Laboratories, Inc. which now labels such tanks.

At present, the Institute is endeavoring to develop industry standards for standard-line pressure vessels.

STEEL WINDOW INSTITUTE, W. M. Martin, Executive Secretary, 18455 Harvest Lane, Brookfield, Wisconsin 53005

This is a trade association composed of a majority of American steel window manufacturers. Through research and interchange of ideas among its members, better products and services are developed and made available to the building trade.

The standardization and simplification presented in SWI recommendations are the answers to maximum economy. However, the creative abilities and productive facilities of the Institute manufacturers are also geared to the exacting custom demands of modern architecture and construction.

Surveys are conducted to determine the relative popularity of types and sizes, and recommendations by the Institute are circulated to members, nonmembers, architects and governmental agencies.

STRUCTURAL CLAY PRODUCTS INSTITUTE, James G. Gross, Director of Engineering and Technology, 1520 18th Street, N.W., Washington, D. C. 20036

This Institute cooperates actively with committees of technical organizations in the standardization of structural clay products. It is represented on technical committees of the American Society for Testing and Materials dealing with methods of testing building constructions; specifications for lime; mortars for unit masonry; and manufactured masonry units. It is also officially represented on sectional committees functioning under the procedure of the United States of America Standards Institute on Minimum Design Loads in Buildings and Other Structures and Building Code Requirements and Good Practice Recommendations for Masonry. The Institute cooperates with the Federal construction agencies in the formulation and revision of specifications for masonry construction.

The Structural Clay Products Research Foundation, a Division of SCPI, is located in the Institute's Research Center in Geneva, Illinois. Research conducted by the Foundation includes tests of properties of materials and assemblies, such as strength, heat transmission, and permeability.

SULPHITE PULP MANUFACTURERS' RESEARCH LEAGUE,
Averill J. Wiley, Technical Director, 1043 East South River Street,
Appleton, Wisconsin 54910

The research activities of this organization are primarily intended to develop methods of processing this byproduct of the pulp and paper industry to find uses for the 3 million tons of organic matter derived from the other half of the tree not used in producing chemical cellulose pulp. A wide variety of byproducts obtained directly and indirectly from the sugars and the lignosulfonates are presently on the market and many others are proposed. The League includes standardization of these products in the fields of dispersing agents, adhesives, food and feed yeast products, roadbinder, clay additives for the ceramic industry, and oil well mud additives. Standardization includes development of analytical control methods, as well as specifications for products to be used by industry and by State, local, and Federal governments.

SUMP PUMP MANUFACTURERS ASSOCIATION, Harold K.
Howe, Managing Director, 734 15th Street, N.W., Washington,
D. C. 20005

This Association developed and published a set of standards known as "SPMA Sump Pump Standards." These standards cover Definitions and Nomenclature, Testing and Rating, Design and Electrical, and Installation Recommendations. The Association also promotes a labeling program whereby pumps are certified to comply with the requirements of these standards.

TANNERS' COUNCIL OF AMERICA, Irving R. Glass, Executive
Vice President, 411 Fifth Avenue, New York, N. Y. 10016

The Council maintains and supports standardization in the hide and leather product area. Its principal activities in this respect are as follows:

Color—Official standards for seasonal leather, footwear and accessory colors are developed and circulated by the Council to the tanning, shoe and other leather product industries. These standards are prepared by the Color Bureau of the Tanners' Council with the advice and assistance of shoe manufacturers and retailers. A semiannual Official Leather Color Book is made available by the Council to all interested trades. Master standards are preserved by the Council for reference and duplication.

Raw Material Trim—The technical laboratory of the Tanners' Council initiated a new standard method for commercial trim of domestic cattlehides. This was approved as economically sound and desirable by an overwhelming majority of tanners and suppliers. It was submitted to the National Bureau of Standards, U. S. Department of Commerce, as a proposed voluntary industry standard and was officially published April 4, 1965, as the Commercial Hide Trim Standard, CS267-65.

Leather Weight Designations—The Council has developed and maintained a standardized system for designation of leather weight or thickness. Since the thickness of leather is a highly important characteristic in the design and production of shoes and other leather products, standardized weight designations were

long needed. Extensive investigation of trade practice enables the Council to establish a limited number of standards which would meet the requirements of the tanning and leather-consuming industries. These have been officially circulated and made available throughout the world.

TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY, P. E. Nethercut, Executive Secretary, 360 Lexington Avenue, New York, N. Y. 10017

The objectives of the Association are to promote investigation, research and interchange of ideas among its members in the field of pulp and paper manufacture and use; to arrange for the presentation and publication of papers; and to provide testing procedures and standards fundamental to pulp and paper manufacture and use.

The Association is divided into nine divisions dealing with problems relating to pulp manufacture, paper and board manufacture, paper-synthetics, corrugated containers, coating and graphic arts, engineering, research and development, testing, and water. Under these divisions are a number of committees engaged in projects coming within the scope of activities of each division.

Testing procedures include official standards, tentative standards, suggested methods and routine control methods. These are prepared by the active technical committees and approved by a Standards Committee and the members of the Association in accordance with prescribed rules and regulations. The Testing Division, whose primary function it is to develop standards and testing procedures, is divided into the following committees: adhesives, chemical methods, fiberboard shipping container, fibrous raw materials, fillers and pigments, microscopy, optical methods, packaging materials, paper, paperboard, paper shipping sack, physical methods, precision, pulp, pulping and papermaking chemicals, release papers, routine control methods, and wax.

The Association cooperates with the American Society for Testing and Materials by having joint committees and by having membership representatives on ASTM technical committees. It also cooperates with the Intersociety Color Council in developing color standards and with the United States of America Standards Institute in promoting USA and International standards.

TELEPHONE GROUP, O. B. Gibson, Secretary, American Telephone & Telegraph Company, 195 Broadway, New York, N. Y. 10007

This Group, which functions under the auspices of the United States of America Standards Institute, consists of the Bell Telephone System and the General Telephone and Electronics Service Corporation. The Group is represented on the USASI Standards Council, the Electrical Standards Board, Safety Standards Board, Mechanical Standards Board, Graphic Standards Board, Information Processing Systems Standards Board, and Miscellaneous Standards Board. It is also represented by 142 individuals on 79 USASI sectional committees concerned with projects in the following fields: Abbreviations and Symbols; Automotive; Civil Engineering and Construction; Drawings; Electrical Engineering;

Materials Handling; Mechanical Engineering; National Electrical Code; Office Machines, Equipment and Supplies; Petroleum Products; Photography; Safety; Vibrations and Mechanical Shock; and Wood. In addition, the Group is represented on the committees of such organizations as the Institute of Electrical and Electronics Engineers in the preparation and revision of USA Standards sponsored by these organizations.

Additional standardization work is carried on through representation on committees of various engineering societies, the Radio Technical Commission for Marine Services, and international organizations such as the International Electrotechnical Commission, an affiliate of the International Organization for Standardization. Cooperative work is handled with numerous committees of the Electrical Section and the Communications Section of the Association of American Railroads, engaged in the formulation of recommendations and specifications dealing with various phases of communication on railroads.

THREAD INSTITUTE, Waldo F. Operer, Executive Director, 15 East 40th Street, New York, N. Y. 10016

The following committees relating to industry product standards are currently functioning: Cotton Thread Standards Committee, Linen Thread Standards Committee, and Synthetic Thread Standards Committee. Federal Specifications for Thread are reviewed on a three year cycle basis by the U. S. Army Natick Laboratories, and the product standards committees of the Institute present their recommendations for revisions when invited to do so. The current Federal Specifications for Thread are V-T-276e, Cotton; V-T-280a, Cotton Gimp, Buttonhole; V-T-291c, Linen; V-T-295, Nylon; V-T-285, Polyester; and V-T-301c, Silk.

The Institute has for many years actively participated in The National Conference on Weights and Measures, sponsored by the National Bureau of Standards, primarily in the interest of uniform thread labeling laws, and has supported the adoption of the Textile Section of the Model State Law.

TILE CONTRACTORS' ASSOCIATION OF AMERICA, J. L. Loomis, Secretary and General Counsel, 1420 New York Avenue, N.W., Washington, D. C. 20005

This Association, founded in 1928, consists of approximately 600 established tile contractors located throughout the country, with a sprinkling membership in Canada and Latin America. It is comprised of firms that operate at the functional level of the tile contractor within the framework of the ceramic tile industry. The organization cooperates with other national trade groups in the preparation and revision of government-recognized specifications for ceramic tile and its related products, particularly organic adhesives and dry-set mortars used in ceramic tile installations.

The Association operates its own hallmark program for organic adhesives independently tested and found to conform to Commercial Standard CS181-52.

TILE COUNCIL OF AMERICA, Lamar H. Brown, Technical Services Director, P. O. Box 326, Princeton, N. J. 08540

To assure uniformity and excellence of ceramic tile installations, the Tile Council develops and sponsors tile specifications for use by the building industry. Its offices are also available for technical queries and consultations. Published specifications include Proposed Standard Specifications for Installation of Ceramic Tile with Water Resistant Organic Adhesives (including requirements of related divisions), and Specifications for Installation of Electrically Conductive Ceramic Tile in Conductive Dry-Set Portland Cement Mortar. In addition, the Council sponsors United States of America Standards Institute Sectional Committee A108 which has developed USA Standards A108.1-1958, A108.2-1958, and A108.3-1958 for Glazed Wall Tile, Ceramic Mosaic Tile, Quarry Tile and Pavers, installed in Portland Cement Mortars (including requirements for related divisions), and A108.5-1960 and A118.1-1959 for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar (including USA Standard Specification for Dry-Set Portland Cement Mortar).

TIN RESEARCH INSTITUTE, R. M. MacIntosh, Manager, 483 West Sixth Avenue, Columbus, Ohio 43201

Members of the Institute participate widely in the development of standards and specifications for tin ingots, tinplate, tin containers, tin alloys, tin castings, bearings, solders, and electrodeposited tin. Membership is held on the specifications committees of the British Standards Institution and the American Society for Testing and Materials.

TIRE AND RIM ASSOCIATION, C. N. Dykes, Executive Vice President, 34 North Hawkins Avenue, Akron, Ohio 44313

This Association is the technical standardizing body of the tire, rim, and related parts manufacturers of the United States. It also carries on rim contour inspection to assure satisfactory tire application and fit. Among the standards established are tire loads, tire inflations, tire section limits, recommended rims, dual spacings, rim dimensions, valve and valve hole dimensions for tire and rim equipment used on passenger cars, motorcycles, motor scooters, trucks, buses, low platform trailers, earthmovers, road graders, agricultural tractors and implements, industrial vehicles, mobile homes, and aircraft.

TOILET GOODS ASSOCIATION, Kay Fitzpatrick, Executive Secretary, 1270 Avenue of the Americas, New York, N. Y. 10020

This Association organized a Scientific Advisory Committee in 1939, composed of leading scientific and technical personnel within its member companies, to develop and publish standards for raw materials used in the manufacture of cosmetics and other toilet preparations. The first standard was issued in 1940, and to date a total of 98 have been published. From time-to-time as new materials are discovered for use in the industry, new standards are issued and older ones revised. The purpose of these standards is to maintain the highest level of purity and excellence of materials used in the manufacture of cosmetics and other toilet preparations.

**TRAFFIC AUDIT BUREAU, H. B. Rasmussen, Managing Director,
845 Third Avenue, New York, N. Y. 10022**

This Bureau, founded in 1933, consists of advertisers, advertising agencies, and operators of outdoor advertising plants. Its purposes are to establish standard practices with respect to the circulation evaluation and visibility of outdoor advertising; to supervise and direct practices in connection with the collection, recording and authentication of traffic and other data related to outdoor advertising; to prepare and issue standardized factual statements of the circulation values of outdoor advertising plants; and to perform other acts and services which will further the joint interests of advertisers, advertising agencies, operators of outdoor advertising plants, and the public.

**TRAILER COACH ASSOCIATION, John O'Connor, Executive
Director, 1340 West Third Street, Los Angeles, California 90017**

For several years the Association has taken a leading part in standardizing on a nationwide basis the requirements for components of the electrical, plumbing, and heating systems, and the installation thereof in mobile homes and travel trailers.

In conjunction with the Mobile Homes Manufacturers Association, TCA was instrumental in the promulgation and adoption of United States of America Standards Institute Standards A119.1-1963 and A119.2-1963, which govern the manufacture of mobile homes and travel trailers in most of the continental United States.

A close alliance is maintained with the National Fire Protection Association, and the Association also participates in an advisory capacity on the Standards and Research Committees of the Western Plumbing Officials Association in formulating plumbing standards for mobile homes and travel trailers.

The Association is presently participating with MHMA, USASI and NFPA in a joint effort toward revision of USA Standards A119.1 and A119.2, and have been for some time engaged in preparing suggested construction standards for mobile homes and travel trailers.

TCA has taken a leading part in the formulation and presentation of legislation covering code requirements, which subsequently were accepted and enacted into law in the States of California and Oregon.

Legislative action of a like nature on bills prepared by TCA, is presently being requested in several more of the Western States.

**TRUCK-TRAILER MANUFACTURERS ASSOCIATION, John B.
Hulse, Managing Director, 1413 K Street, N.W., Washington, D. C.
20005**

Acting in concert with other organizations, the Truck-Trailer Manufacturers Association took the lead in making available a Standard Industry Procedure for Determining Heat Transfer of Refrigerated Truck Trailers. This standard was developed at the National Bureau of Standards with assistance from the U. S. Department of Agriculture and the Association. It is available from the Association.

TWISTED JUTE PACKING AND OAKUM INSTITUTE, Lester B. Platt, Secretary, P. O. Box 52, Scarsdale, N. Y. 10583

In connection with standardization matters arising in this industry, this Institute has appointed a Standardization Committee whose sole function is to prepare and recommend standards covering the Institute's members' products. This committee cooperated with the Plumbing Fixtures Committee of the Federal Specifications Executive Committee in the development of Federal Specifications for marine oakum and twisted jute packing. Federal Government agencies presently use these specifications to base contracts for purchases.

ULTRASONIC MANUFACTURERS ASSOCIATION, Penn Affiliates, Inc., Executive Secretary, 271 North Avenue, New Rochelle, N. Y. 10801

This Association was organized in 1955 to promote by every lawful means the growth of the industry on a sound and lasting basis. Formation of the Association was motivated by the vast potential of ultrasonics for commercial, industrial, defense, and medical applications.

The first achievement by UMA was development of definitions covering basic industry terminology designed to promote a common language and thus facilitate understanding between manufacturers and users. Second was development of a standard rating covering ultrasonic electrical generators.

A major achievement for the entire industry was development and adoption of a Recommended Standard Procedure for evaluating ultrasonic cleaning equipment, the basis of which is a chemical reaction proportional to cavitation activity when a standard test solution is exposed to ultrasonic cavitation.

UMA cooperates in the development of standards with the United States of America Standards Institute and is represented on USASI Sectional Committees S1 on Acoustics and S3 on Bioacoustics. Other organizations with which UMA cooperates include the Institute of Electrical and Electronics Engineers, National Safety Foundation, Acoustical Society of America, National Electrical Manufacturers Association, and American Society for Testing and Materials. In addition, UMA provides assistance, when requested, to various Government agencies such as the Departments of the Navy and Air Force, and maintains standardizing liaison with other Government agencies such as the Federal Communications Commission.

UNDERWEAR INSTITUTE, Robert D. McCabe, Managing Director, 350 Fifth Avenue, New York, N. Y. 10001

The Institute's pioneering in the field of standardization dates back to 1920. At that time it began work on the collection of data, looking toward the standardization of methods of measuring, measurements and tolerances for knit underwear in the interest of the consumer, as well as the jobber, manufacturer, and retailer. To facilitate this work, the Institute detailed one of its employees to the National Bureau of Standards where for over 7 years he collected and tabulated essential data.

In 1930, the Institute requested the cooperation of the National

Bureau of Standards in the establishment of a Commercial Standard for Knit Underwear, which was published as CS33-32, effective January 1, 1932. At the request of the Institute, this standard was revised and published as Commercial Standard CS33-43, effective July 30, 1943.

The Underwear Institute was the first manufacturer's association to recognize the value of, and to endorse, the height-weight body-measurement standards as the basis for revising its infants', children's, girls', and boys' standards. This led to the publication of CS198-55, effective March 1, 1955.

Over the years the Institute has continued its work in this field in collaboration with the Commodity Standards Division (now Product Standards Section) of the U. S. Department of Commerce, and looks forward to a continuation of this cooperation. The Institute now has a Proposed T-Shirt Standard before the Department and expects its publication as a Commercial Standard in the near future.

**UNDERWRITERS' LABORATORIES, Baron Whitaker, President,
207 East Ohio Street, Chicago, Illinois 60611**

This organization was established to maintain and operate laboratories for the examination and testing of devices, systems, and materials. Founded in 1894, the enterprise is sponsored by the American Insurance Association, and is operated for service, not for profit. It is chartered as a nonprofit corporation without capital stock, under the laws of the State of Delaware.

Testing laboratories are maintained at Chicago, Illinois, Melville, L. I., New York, Northbrook, Illinois, and Santa Clara, California. Of equal importance with the examination and testwork of Underwriters' Laboratories is its inspection and follow-up program in the factories where listed devices are manufactured. Representatives charged with the responsibility for making these periodic inspections are located in approximately 200 cities throughout the United States and 25 cities outside of the United States.

The objects of Underwriters' Laboratories are to conduct scientific investigations, studies, experiments, and tests to determine the relation of various materials, devices, constructions, and methods to life, fire, and casualty hazards, and to ascertain, define, and publish standards, classifications, and specifications for materials, devices, constructions, and methods affecting such hazards, and other information tending to reduce and prevent loss of life and property from fire, crime and casualty.

The majority of underwriters in the United States, and many Federal, State, and municipal authorities, plant operators, architects, building owners and users either accept or require listing by Underwriters' Laboratories as a condition of their recognition of devices, systems, and materials having a bearing upon life and fire hazards, and upon theft and accident prevention.

It should, however, be noted that findings of Underwriters' Laboratories in any case represent only its independent opinion arrived at in accordance with its aims and purposes. The correctness of this opinion cannot be guaranteed, nor can Underwriters' Laboratories guarantee that its findings will be accepted or recog-

nized in any individual case. Such assurances can be obtained only from the authority having jurisdiction.

It should be noted as well that products labeled or listed are not necessarily equivalent in quality or merit.

In the event of a disagreement between Underwriters' Laboratories and any of its clients with respect to an engineering or technical matter involving the method of measurement used in the tests applied by Underwriters' Laboratories, the results of the tests so used, or the interpretation of these results, the question at issue may be submitted to the National Bureau of Standards, provided that in the opinion of the Bureau the importance of the case justifies its acceptance by the Bureau and that parties to the submission agree in writing to accept and abide by the finding of the Bureau.

The Underwriters' Laboratories is divided into several engineering departments, each dealing with distinct and separate subjects as follows: Burglary protection, casualty and automotive, chemical, electrical, gases and oils, and fire protection. Each of these departments has prepared standards providing specifications and requirements for construction and performance under test and actual use of systems, materials, and appliances of numerous classes submitted to the Laboratories.

The Underwriters' Laboratories has issued more than 230 of these standards and sets of requirements based on sound engineering principles, actual experience, and an appreciation of the problems of manufacturing, installation, and utility. These standards are the result of years of research and collaboration by Laboratories' engineers, manufacturers, and recognized specialists in many fields, including the members of the four Laboratories' Engineering Councils.

The requirements of a standard are so stated that if correctly applied, there is no discrimination between the products of two or more manufacturer-submitters. They are published so that others may know the basis for Laboratories' opinions and the standards must necessarily justify the opinions. Many of the Laboratories' standards bear ASA approval.

The standards are an important tool of Underwriters' Laboratories in its established policy of stating the facts concerning products investigated, and its opinion concerning these facts.

A manufacturer whose product passes the Laboratories' requirements and for which factory inspections service is to be established, is provided with a "Procedure" prepared by Laboratories' engineers as part of the work under the application. This "Procedure" describes and illustrates the product in detail, particularly as to the construction or performance of the features tested. It becomes the manufacturer's guide for future production, and is used by representatives of Underwriters' Laboratories in re-examination and periodic check testing. The Laboratories' factory inspection service of listed products is intended to supplement and check the manufacturer's own regular inspections to insure compliance of the factory output with requirements established for the product.

Manufacturers, regularly employing inspection service, are freely consulted in all matters concerning standards of perfor-

mance and inspection in their respective industries.

Under Label Service the manufacturer attaches labels to such of his products as are found, by the specified examinations and tests conducted by him, to be in compliance with the applicable requirements. The Laboratories' representatives conduct frequent inspections at the factory in which the products are manufactured and labeled for the purpose of checking the efficiency of the manufacturer's own inspection program. Should the inspection by the Laboratories' representative disclose features not in compliance with the requirements, the manufacturer is required to either correct such items or remove labels from the product. In many cases, examinations and tests are conducted at the Laboratories on samples of labeled products purchased on the open market and serve as a countercheck on factory inspection work. All such labels (manifests of inspection) include the words "Underwriters' Laboratories, Inc., Listed," and are obtainable only from Underwriters' Laboratories. Label service includes listing in the published records of Underwriters' Laboratories.

More than 1,000,000,000 labels are delivered annually to manufacturer-subscribers to the label service.

A number of Federal Specifications covering material or appliances of classes which are under supervision of Underwriters' Laboratories recognize the Laboratories' label as evidence of compliance with the applicable requirements of such Federal Specifications.

The bidder shall submit to the purchasing agency proof that the material or appliance he proposes to supply under this specification conforms to the standards of the Underwriters' Laboratories as regards fire and casualty hazards. The label of the Underwriters' Laboratories will be accepted as conforming with this requirement. In lieu of the label, the bidder may submit independent proof satisfactory to the purchasing agency that his material or appliance conforms to the published standard, including methods of test, of Underwriters' Laboratories.

In its work in standardization, the Underwriters' Laboratories cooperates with many organizations including the United States of America Standards Institute and National Fire Protection Association. It is also officially represented on many USASI sectional committees.

The Underwriters' Laboratories also cooperates with the American Society for Testing and Materials through representation on technical committees dealing with the development of standards and methods of test for items such as gypsum, electrical insulating materials, rubber products, bituminous waterproofing and roofing materials, petroleum products and lubricants, and spread of flame on interior finishes.

UNITED LIGHTNING PROTECTION ASSOCIATION, Albert Hoefer, Jr., Secretary, P. O. Box 462, Ithaca, N. Y. 14851

Established in 1935, this Association provides reliable educational materials on the hazards of lightning and what constitutes proper lightning protection. Its members must conform to the highest standards of lightning protection systems, engineering, installation and service to maintain membership.

Members of the Association serve on numerous committees and in other key roles in helping to establish various standards and codes such as the Lightning Protection Code of the National Fire Protection Association, and the Lightning Protection Installation Requirements Code of Underwriters' Laboratories. The Association is consulted frequently by building supply manufacturers, insurance firms, safety groups, and power companies to advise on potential hazards and what constitutes proper lightning protection.

UNITED STATES OF AMERICA STANDARDS INSTITUTE,
Donald L. Peyton, Managing Director, 10 East 40th Street, New York, N. Y. 10016

This is a nonprofit membership organization whose bylaws provide for membership from national trade, technical and professional groups, firms from commerce and industry, government agencies and departments, consumer groups, and similar organizations.

This Institute, which replaced the American Standards Association in 1966, was originally organized as the American Engineering Standards Committee (AESC) in 1918 by five engineering societies: the American Institute of Electrical Engineers, American Society of Mechanical Engineers, American Society of Civil Engineers, American Society of Mining and Metallurgical Engineers, and the American Society for Testing Materials. The AESC's initial purpose was to provide means for coordinating the standards issued by its founders, eliminating confusion and duplication among those standards. Its first act was to invite three Government departments to join on an equal footing with the founder societies. The War Department, the Navy Department, and the Department of Commerce accepted the invitation and the three representatives from each of these eight groups developed the principles and procedures which basically applied to the work of the American Standards Association through August 1920. Enlarged in 1920 by the addition of trade associations, as well as more technical and professional societies, the AESC in 1928 was reorganized as the American Standards Association in order to provide a more workable structure. Without significant structural change the Association became the American Standards Association, Inc., in 1948. The act of incorporation, however, involved the loss of the Member-Bodies from the Federal Government which then numbered 10. On August 29, 1966, the Association was reorganized as the United States of America Standards Institute, with a new constitution and bylaws and incorporated, as in the case of its predecessor, under the laws of the State of New York. The purpose of the change was to expand the program and accelerate the output of voluntary national standards.

The Institute serves as the national clearinghouse for standards and provides the machinery for developing and approving standards which are supported by a national consensus. Article 3, C3.1 of the USA Standards Institute Constitution states: "In standardization practice a consensus is achieved when substantial agreement is reached by concerned interests according to the judgement of a duly appointed authority. Consensus implies

much more than the concept of a simple majority, but not necessarily unanimity."

Technical societies, trade associations, consumer groups, and the like, make up the Member Bodies of the Institute. Other classes of members are Company Members, Sustaining Members (individuals or organizations not otherwise eligible for membership but interested in standards development), and Honorary Members. Three councils make up the operating arms of the Institute—the Member Body Council, in which the responsibility for the approval of standards rests, and the Company Member Council and the Consumer Council, both of which have an input into the standards program of the organization in that they can recommend standards projects to be developed. Each council may establish such boards and committees as are considered necessary to accomplish its program. The Member Body Council develops and maintains all procedures relating to the preparation, approval, acceptance, and designation of standards, and the constitution of standards boards and committees. The Company Member Council develops programs to maintain liaison with, and represent the interests of, commerce and industry in the work of the Institute. The Consumer Council is responsible for the representation and protection of the interests of the consuming public in the work of the Institute. It is also concerned with the application of the Institute's procedures for certification and labeling of consumer goods.

Member Bodies are represented selectively by 16 of the 45 members of the Board of Directors. The remaining Board members are 12 nominated by the Company Member Council, four nominated by the Consumer Council, four directors-at-large nominated by the Board of Directors in addition to the president, the three vice-presidents, the Director of the National Bureau of Standards, if willing to serve (*ex officio*, with vote), the chairmen of the three councils, and the past president of the organization. The Board of Directors is the governing body of the Institute. It may delegate any part of its authority over conduct of the affairs of the Institute.

The staff of the Institute, which has no direct part in the development of standards, provides secretarial services to the standards boards and to the Councils and acts to assist the sponsors of projects in the solution of organizational and procedural questions.

As of August 1966, there were close to 2,800 USA Standards on the organization's books. Of these, approximately one-third have resulted from submittals by competent organizations of standards which they have developed through their own procedures, together with evidence as to the existence of consensus in support of such standards. The balance have come through the work of sectional committees. A few—mostly simple standards—have been approved after acceptance by a General Conference. Many of the standards on the current list have been revised a number of times. Standards approved by the Institute are given the title "USA Standard."

The USA Standards Institute is the United States member of the International Organization for Standardization (ISO), which now consists of the national standards bodies of 52 countries. The United States' viewpoints to be presented in the technical work of

the ISO are developed either through the interested sectional committee or through a competent committee of another organization or, if there be none of these available, through a committee specially organized as a USA Advisory Committee for ISO Technical Committee. The work of the ISO technical committees results eventually in ISO Recommendations which may be embodied in the national standards of the ISO's Member-Bodies. A small number of ISO Recommendations have so far been embodied in USA Standards. For international standardization in the electrical field, the Institute provides services to the United States National Committee of the International Electrotechnical Commission. This latter autonomous organization which had its inception in 1904 serves as the electrical branch of the ISO and devotes its activities solely to the electrical field.

Financial support of the Institute comes from the dues paid by Company Members, Member-Bodies, and Sustaining Members. An additional source of income is the sale of USA Standards.

The Institute maintains a library of about 160,000 standards which includes those received through an exchange system with the national standards bodies of all countries where such exist. The library is open to the public.

In addition to USA Standards and the annual catalog thereof, the Institute publishes monthly the "Magazine of Standards" devoted to discussions of principles, practice, and application of standardization and to news on the Institute and international standardization activities. The Institute holds annually a National Conference on Standards. This usually lasts for 3 days and includes presentation of papers and discussions of standards problems at the international, national, industry, and company levels. The Proceedings of the National Conferences are published and are available for sale. The "Magazine of Standards" is a part of the membership service for all members, but it is also available on a subscription basis to individuals not having company affiliation, as well as to institutions, libraries, schools, and the like. In addition, the Institute publishes a monthly newsletter.

UNITED STATES COUNCIL OF THE INTERNATIONAL CHAMBER OF COMMERCE, Morton E. Calvert, Director of Public Relations, 103 Park Avenue, New York, N. Y. 10017

The International Chamber of Commerce, with headquarters in Paris and national committees in 40 countries, promotes standardization in most phases of world commerce. These include banking and trading procedures, definitions of trade terms, sizes of pallets and containers, markings for dangerous goods, extent and validity of distribution statistics, etc. In addition, the Chamber publishes comparison studies of conditions and regulations affecting such matters as advertising and arbitration in various countries. It also issues codes of fair play and recommendations for uniformly high levels of commercial practice. Full information and all publications are available from its United States Council.

UNITED STATES GOLF ASSOCIATION, Joseph C. Dey, Jr., Executive Director, 40 East 38th Street, New York, N. Y. 10016

This Association has developed standards for golf balls and golf clubs. In its current booklet, "Rules of Golf," this Association's

specifications concerning the style and make of clubs, and the size, weight, and velocity of golf balls, are included. These specifications are applicable to equipment and balls used in connection with tournaments conducted by this Association or under its rules.

U. S. PHARMACOPEIA, PHARMACOPEIA OF THE UNITED STATES OF AMERICA, UNITED STATES PHARMACOPEIAL CONVENTION, Dr. Lloyd C. Miller, Director of Pharmacopeial Revision, 46 Park Avenue, New York, N. Y. 10016

This Convention is a nonprofit corporation which meets every 10 years to reorganize the revision program of the Pharmacopeia of the United States of America. It is made up mainly of representatives of the medical and pharmacy colleges of the United States, of the State and national medical and pharmaceutical associations, the national trade associations, and the departments of the Federal Government most concerned with standards for medical preparations. The Convention elects, for 10-year terms, officers, a Board of Trustees, and a Committee of Revision consisting of 60 members, each of whom is qualified in a special branch of medicine, pharmacy, or the allied sciences. The Convention is financed mainly through the sale of the Pharmacopeia. The Committee members receive only modest honoraria for a vast amount of voluntary work.

The sole object of the Convention is to produce at intervals of 5 years a new revision of the Pharmacopeia by the Committee of Revision serving under the direction of a salaried, permanent staff. The revision program includes: (a) Selection of those drugs held in high esteem as representing the soundest practice of medicine; (b) the establishment of standards of strength and purity for the selected drugs; and (c) the provision of tests, assays, and material standards of reference required to demonstrate compliance with the specifications set forth. Supplements of the Pharmacopeia are provided as required.

The standards given in the Pharmacopeia are recognized by Congress in the Federal Food, Drug, and Cosmetic Act for the purpose of regulating the quality of drugs moving in interstate commerce and by the State legislatures in corresponding statutes for enforcement by State agencies.

VACUUM WOOD PRESERVERS INSTITUTE, T. P. Wier, Jr., President, c/o Wood-Protection Company, 5151 Holmes Road, Houston, Texas 77033

This organization is made up of persons interested and active in the field of wood preservation. The organization is engaged in promoting improvement in preservatives and in processes for their application to wood as well as the standardization of specifications therefor.

VERMICULITE INSTITUTE, Edward R. Murphy, Executive Secretary, 208 South LaSalle Street, Chicago, Illinois 60604

This Institute is a national trade association of manufacturers and processors of vermiculite and has been active in the field of

standardization since its inception in 1941. Activity is maintained on committees of the American Society for Testing and Materials in the field of concrete, gypsum, acoustical materials, fire testing, thermal insulation, and methods of testing building materials. Additionally, this organization has participated in standardization activities of the American Society of Heating, Refrigeration and Air-Conditioning Engineers relevant to the preparation of the "Guide." The Vermiculite Institute is also active in the American Concrete Institute and, particularly, on the committees oriented to lightweight aggregates and lightweight aggregate concrete. Recent activity on the United States of America Standards Institute level in USASI Committee A-122.1 on Vermiculite Concrete has produced a USA Standard on this material. In addition, the Vermiculite Institute enjoys activity with the model building codes active in the United States: specifically, the Uniform Building Code of the International Conference of Building Officials, the Basic Building Code of the Building Officials' Conference of America, and the Southern Standard Building Code of the Southern Building Code Congress. In addition to these national code activities, the Institute, from time to time, takes part in building code activity of specific municipalities.

VINYL FABRICS INSTITUTE, Paul F. Johnson, Executive Secretary, 60 East 42nd Street, New York, N. Y. 10017

The Institute, through its Technical Committee, has submitted proposals to the Commodity Standards Division (now Product Standards Section) of the U. S. Department of Commerce which have resulted in the publication of Commercial Standard CS258-63 on Expanded Vinyl Fabrics for Apparel Use, and a Tentative Standard TS-5641B on Expanded Vinyl Fabrics for Furniture Upholstery Use. Through its Simplification Committee, Simplified Practice Recommendation R242-51 covering Vinyl and Pyroxylin Coated Fabrics, has been published and updated through two revisions to make it representative of current industry production.

WALL PAPER INSTITUTE, Joseph Roby, Secretary, 969 Third Avenue, New York, N. Y. 10022

Through the Trade Practices and Standards Committee, the Wall Paper Manufacturer's Association, predecessor of this Institute, cooperated with the National Bureau of Standards in the establishment of Commercial Standard CS16-29 covering quality of wall paper. The Standards Committee of the Institute is charged with the responsibility of determining the need and application of standards for the manufacturers.

WATER CONDITIONING FOUNDATION, R. G. Breeden, Jr., Secretary-Treasurer, 1201 Waukegan Road, Glenview, Illinois 60025

In 1959 the Foundation developed standards for water softening equipment which have twice been revised and upgraded. In con-

junction with the development of standards, WCF has established a laboratory to engage in performance testing of equipment. Units which meet the Foundation's standards carry the WCF Gold Seal, which assures the consumer that the unit has been performance tested in conformance with industry standards. The Foundation has also worked closely with the National Bureau of Standards, U. S. Department of Commerce, in the development of a Commercial Standard for water softening equipment.

The Foundation is presently pursuing programs for the development of standards for chemical feeders, all types of filter mechanisms, and softening equipment to be used in commercial systems.

WATER POLLUTION CONTROL FEDERATION, Ralph E. Fuhrman, Executive Secretary, 3900 Wisconsin Avenue, N.W., Washington, D. C. 20016

The Federation is concerned with the control of water pollution through the proper collection and treatment of domestic and industrial wastewaters.

A principal activity of this organization is the publication of the monthly technical "Journal of the Water Pollution Control Federation." This Journal, with 13,000 readers all over the world, is the acknowledged reference for technical information in the field. The Federation is also publisher of the following: Periodic Indexes of the Federation Journal and a series of Manuals of Practice including the following subjects: "Safety in Wastewater Works," "Regulation of Sewer Use," "Units of Expression for Wastes and Waste Treatment," "Sewer Maintenance," "Sewage Treatment Plant Design," "Design and Construction of Sanitary and Storm Sewers," "Uniform System of Accounts for Wastewater Utilities," and "Operation for Wastewater Plants."

In addition, the Federation is one of the three sponsoring organizations for the continuing production of "Standard Methods for the Examination of Water and Wastewater," which is revised and published each five years. This publication has become the standard in the analytical field in matters concerning water and wastewater.

WATER SYSTEMS COUNCIL, Durward Humes, Executive Secretary, 205 West Wacker Drive, Chicago, Illinois 60606

The Council represents and serves the leading manufacturers of domestic and farm water systems equipment. Approximately 70 percent of all such production is represented by the membership.

The "Testing and Rating Standards" adopted by the Council have been established in the public interest, and are designed to supply the purchaser and/or user of automatic, electric water systems with accurate performance data and to assist in the determination of proper application and selection of this equipment. Any manufacturer of electric water systems may indicate adherence to these standards by stating in the specifications and product description: "Tested and rated in accordance with Water Systems Council standards." Member manufacturers of the Council may also affix their "Performance Certified by Manufacturer" seal to products bearing their name or brand name, or incorporate the seal design in the description of any product to indicate adherence

to these Testing and Rating Standards and procedures. The Standards cover: (1) Shallow well water system pumps; (2) deep well water system pumps; (3) deep well submersible water system pumps; (4) pump motor standards; (5) submersible pump motor standards; and (6) hydropneumatic tank volume standards.

WEST COAST LUMBER INSPECTION BUREAU, P. R. Hollenbeck, Executive Vice President, 1410 S. W. Morrison Street, Portland, Oregon 97205

The Bureau has adopted and revised its standard grading and dressing rules for Douglas Fir, West Coast Hemlock, Western Red Cedar, Sitka Spruce and White Fir grown and manufactured in the West Coast Region, which includes that territory from the summit area of the Cascades and Sierra Mountains and west to the sea in Washington, Oregon and California. These rules are in conformity with American Lumber Standards which are set forth in the current edition of Simplified Practice Recommendation 16-53, published by the National Bureau of Standards. The Bureau maintains an Executive Committee which cooperates with similar committees of other lumber manufacturing associations, including the American Lumber Standards Committee, relative to the adoption and maintenance of American Lumber Standards.

This Bureau has adopted a grade and trademark insignia which is officially registered by the Bureau and may only be applied under individual mill licenses or by inspectors or supervisors of the West Coast Lumber Inspection Bureau. Graders who use the official stamp are subject to examination for grading efficiency prior to license being issued. Following the issue of the license, their work is subject to regular unannounced checkup by the Bureau's supervisors of grades to insure efficient and accurate application of the official stamps. The license may be revoked unless the efficiency is maintained at 95 percent as measured by the Bureau's standards of grade and official review by grading supervisors. The official trade and grademarks used by this Bureau are for the purpose of identifying the quality of Douglas Fir, West Coast Hemlock, Western Red Cedar, Sitka Spruce and White Fir. These marks identify West Coast lumber as the grades described in the Bureau's standard grading and dressing rules. In the use of the Bureau's grademark trademark, a manufacturer is identified by a firm name or trademark or a number assigned to him by the Bureau. These marks thus identify the lumber bearing them as of a standard West Coast grade.

Since 1961 the West Coast Lumber Inspection Bureau has been actively engaged in simplifying and standardizing its grading rules in conjunction with agencies in other regions who write rules for grading softwood lumber. This work is continuing and the Bureau hopes to soon publish a new grading rules book incorporating simplified and standardized provisions.

WESTERN WOOD MOULDING PRODUCERS, Warren C. Jimereson, Secretary-Manager, 2041 S.W. 58th Avenue, Portland, Oregon 97221

Through the last 200 years, wood mouldings have been made in an infinite number of sizes and patterns. Many of the popular

architectural moulding patterns of today can be traced to early colonial building. There are, however, thousands of moulding patterns that were designed for a particular purpose. Many of these no longer exist, or if they do, they are of small consequence to the industry.

Western Wood Moulding Producers has undertaken the development of a moulding catalog that can be used as a standard basis for all moulding producers throughout the United States. Working with the Southern Pine Association and the Western Wood Products Association, WWMP has formulated the new moulding standard and identified it as the "Wood Products Moulding Catalog" ("WP Series," short title). The WP Series Catalog will show the patterns produced and used in appreciable quantity throughout the United States by all geographical areas of moulding production.

The new catalog will be the basis for the development of a Product Standard through the Department of Commerce on wood mouldings.

WESTERN WOOD PRODUCTS ASSOCIATION, Wendell B. Barnes, Executive Vice President, 700 Yeon Building, Portland, Oregon 97204

This Association combines the membership of the former Western Pine Association and West Coast Lumbermen's Association and has members scattered throughout the twelve Western states. They manufacture Douglas Fir, Larch, Ponderosa Pine, Sugar Pine, Idaho White Pine, Lodgepole Pine, White Fir, Englemann Spruce, Sitka Spruce, Western Hemlock, Western Red Cedar and Incense Cedar.

The Association writes grading rules in conformity with SPR16-53 for softwood lumber produced in all of the Western states except the coastal area lying west of the Cascades in Oregon and Washington and west of the coast range in northern California. In addition, the Association supervises grading by its members and others located in the West Coast area for which grading rules are written by the West Coast Lumber Inspection Bureau.

Use of the Association's official grade, trade and species marks, indicates that the lumber was graded under Association supervision by either a member or a nonmember mill. These marks are protected and can be placed on lumber only by a Western Wood Products Association Quality Supervisor or by an operator whose grading practices are given regular and periodic quality supervision by the Association. Each grade stamp carries a mill number or name so that the shipper can be identified.

The Association's Inspection Certificates financially guarantee the grade and tally of certified shipments. Also, most members participate in a program whereby both the member and the Association guarantee to the original consignee the grade of grade stamped lumber.

WESTERN WOODEN BOX ASSOCIATION, C. O. Thompson, Secretary-Manager, 55 New Montgomery Street, San Francisco, California 94105

This Association represents the western wooden box industry in the performance of standardization functions. Sawn wooden

boxes, crates, and lugs manufactured by the industry are produced almost 100 percent for use by the fresh fruit and vegetable industries.

In California, where most of the box shooK manufactured by the industry is used, the majority of such containers are covered by standards set up under the California Agricultural Code. In arriving at the standards so set by law, cooperation between the wooden box industry, the fresh fruit and vegetable industries, Trans-Continental Freight Bureau, and the Bureau of Fruit and Vegetable Standardization (a division of the California Department of Agriculture) is maintained.

The wooden box industry itself has manufacturing standards as set forth in the Standard Grading Rules for Box ShooK 1963. Whereas the standards set up under the State of California Agricultural Code specify inside dimensions of containers, the Standard Grading Rules provide a yardstick for quality of shooK used in the manufacture of containers.

In addition, Freight Container Tariff No. 1-G provides mandatory standards for minimum thickness and other container specifications for use in movement of perishable fresh produce via rail interstate. Truck movement of sawn wooden nailed containers, although not covered by container tariffs, for the most part are covered by specifications of inside measurement as set forth in the California Agricultural Code.

WINE INSTITUTE, Don W. McColly, President, 717 Market Street, San Francisco, California 94103

This Institute devotes its efforts in standardization primarily towards advocating the adoption of wine and brandy quality standards as established by Federal and State agencies. This Institute's committees make studies and recommendations in connection with standards of identity and quality for wine and brandy. The recommendations are then placed before official agencies for consideration in connection with the establishment of new standards or the revision of existing standards.

WOVEN FABRIC BELTING MANUFACTURERS ASSOCIATION, Penn Affiliates Inc., Managers, 271 North Avenue, New Rochelle, N. Y. 10801

This Association was organized in 1955 to consider and deal with common intra-industry problems and to foster and further, in every lawful manner, the interests of the manufacturers of woven fabric belting and of allied products and supplies.

In 1959, after many months of cooperative effort, the Association developed and published the first Handbook on Solid Woven Cotton Belting, containing information on characteristic and applications. The Handbook also defines solid woven cotton belting, and contains information on available treatments as well as recommended standards covering thickness, weights, tensile strength, and elongation. Information on width, load factor, temperature resistance, pulley diameters, and lacing is also included.

WFBMA is currently preparing a handbook on splicing and, in addition, is active in standardization through representation on

various USASI national and international committees dealing with belts and pulleys.

YACHT SAFETY BUREAU, E. S. Terwilliger, Executive Vice President, 336 Old Hook Road, Westwood, N. J. 07675

Founded in 1947 to advance the basic safety of pleasure boats and their equipment, this Bureau is engaged in "testing for public safety." It is jointly and equally sponsored by the major marine insurance underwriters and the National Association of Engine and Boat Manufacturers.

In carrying out its purpose, the Bureau develops standards and classifications for materials, devices, and methods bearing on basic safety of boats, against which particular products may be tested and evaluated for safety. To date, there have been 40 Classification Standards published by the Bureau.

YSB accepts for inspection, testing and safety evaluation products intended for use on or in connection with small boats, primarily pleasure boats, including hulls and entire boats. Listing of a manufacturer's product and use of the Bureau's label certifies that the production samples tested were found acceptable under the Bureau's requirements.

3. Government Standardizing Agencies

COMMERCE, DEPARTMENT OF, NATIONAL BUREAU OF
STANDARDS, OFFICE OF ENGINEERING STANDARDS SER-
VICES, PRODUCT STANDARDS SECTION, D. R. Mackay, Chief,
Washington, D. C. 20234

The Product Standards Section (formerly the Office of Commodity Standards) cooperates with, and assists groups of producers, distributors, users, and others interested in the development of voluntary standards for various products. Standards developed through this program have included requirements for building products, ceramic and mineral products, plumbing materials and fixtures, lumber, millwork and other wood products, paper and pulp products, textiles and textile products, containers and packages, and plastic materials and products of many types.

Published standards developed by this activity were previously called "Simplified Practice Recommendations" and "Commercial Standards." Simplified Practice Recommendations set forth sizes, kinds, and types of specific manufactured articles which could be identified as standard stock items. Commercial Standards established requirements for materials, construction, performance, testing, grading, and marking of various manufactured products. Recent revisions of these two types of standards have provided sufficient evidence of overlapping to suggest that only one type of standard is necessary. The term "Product Standard" has been selected to identify future standards developed through this program.

Procedures for the development of such standards were printed in the Federal Register on December 10, 1965, to set forth the mechanics of processing such voluntary standards. These procedures also established a requirement that all standards be reviewed within five years after issuance or last revision. In addition, all existing standards are being reviewed to determine the need for revision, amendment, or withdrawal. Standards will be revised or withdrawn if they are obsolete, technically inadequate, no longer acceptable to or used by the industry, or not in the public interest. As existing standards are revised, they will become "Product Standards."

Standards developed by this activity of the National Bureau of Standards are voluntary standards established in the public interest to assist manufacturers, distributors, consumers, and users in establishing requirements for products and in identifying those products that meet such requirements. These voluntary standards become established as trade customs through reference in contracts, labels, invoices, or advertising literature, and the provisions become enforceable through usual legal channels when they are incorporated into a sales contract.

The procedures for the development of standards under this program provide for the circulation of a proposed standard to appropriate producers, distributors, users, consumers, and other interested groups for consideration and comments. As a result of the comments and suggestions received, adjustments are made in the proposed standard which are technically sound and will secure the greatest acceptance of the standard by industry.

A Standard Review Committee is established consisting of qualified representatives of producers, distributors, consumers, and

users of a product for which a standard is sought, to review and recommend a proposal for acceptance. If any objections are raised by members of the committee, further adjustments are made and the committee is required to provide information concerning the reasons of the majority if such objections are rejected.

When the National Bureau of Standards determines that all criteria and procedures have been met, a recommended standard may be distributed for acceptance. If the analysis of such a distribution indicates that the recommended standard is supported by a substantial segment of the industry, it may be published as a Product Standard.

A Standing Committee is then established to receive and consider proposals to revise or amend the standard in light of changing circumstances. A Standing Committee is representative of the industry and is adequately balanced among producers, distributors, and consumers.

DEFENSE, DEPARTMENT OF, OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS), OFFICE OF TECHNICAL DATA AND STANDARDIZATION POLICY, Col. O. C. Griffith, Deputy Director, Washington, D. C. 20301

The administration of the Department of Defense Standardization Program is a primary responsibility of this office.

The Defense Standardization Program is centrally controlled and directed by the Office of the Secretary of Defense, with operational responsibility assigned to the Departments of the Army, Navy, Air Force, Defense Supply Agency, and other agencies of the Department of Defense. The principal objective of the Defense Standardization Program is to provide uniform definitions of the technical requirements for parts, equipments and systems in which the various elements of the Department of Defense have a common interest. The principal products of this program have been the development of nearly 40,000 specifications and standards defining the technical requirements of the Department of Defense. This series of technical documents has largely replaced the individual specifications and standards formerly utilized by each of the Military Departments, and provides industry with a great body of uniform technical requirements to be met by military suppliers. The use of the specifications and standards is imposed without causing unacceptable compromise of performance, reliability, timely availability or cost of military weapons systems, and they are revised as necessary to reflect the most advanced techniques and hardware.

In addition to specifications and standards, the program includes the effective management of drawings, handbooks, qualified products lists and engineering records. The program covers the entire cycle from the generation of military operational requirements to the final disposal of items and related technical documentation. The intent is to minimize the variety of items, processes and practices which are associated with design, development, production and logistic support; including enhancing the interchangeability, reliability and maintainability of military parts, equipments and systems, when essential to the improvement of the operational

readiness of the military services. The intimate participation by military contractors in all phases of the program is required for its success.

Basic policies governing the Defense Standardization Program require that maximum use be made of available industry standards which are responsive to Military Departments. In this way, duplication of effort in the development of needed standards between industry and the Department of Defense is avoided.

The Defense Standardization Program is the largest and most comprehensive standardization program in the world—governmental or nongovernmental. The specifications and standards developed by the program are widely used within industry. In fact, many of its specifications and standards constitute the standard to which industry builds for commercial purposes. The procedures of the program have been widely copied by individual industrial firms and industry standardizing organizations as the basis for their own standardization programs.

GENERAL SERVICES ADMINISTRATION, FEDERAL SUPPLY SERVICE, OFFICE OF STANDARDS AND QUALITY CONTROL, George W. Ritter, Assistant Commissioner, Washington, D. C. 20405

With the passage of the Federal Property and Administrative Services Act of 1949, known as Public Law 152, 81st Congress, there came into being on July 1, 1949, for the first time in the organization of the Federal Government, a general housekeeping service. The agency thus established by the Congress, known as the General Services Administration (GSA), is made responsible under the law "to provide for the Government an economical and efficient system for: (a) the procurement and supply of personal property and nonpersonal services, including related functions such as contracting, inspection, storage, issue, specifications, property identification and classification, transportation and traffic management, establishment of pools or systems for transportation of Government personnel and property by motor vehicle within specific areas, management of public utility services, repairing and converting, establishment of inventory levels, establishment of forms and procedures, representation before Federal and State regulatory bodies; (b) the utilization of available property; (c) the disposal of surplus property; and (d) records management." The Act also gives the Administrator authority to "establish and maintain a uniform Federal Supply Catalog System. . . ."

GSA Operating Services. The GSA consists of six operating services: Defense Materials Service, Federal Supply Service, National Archives and Records Service, Public Buildings Service, Transportation and Communications Service, and Utilization and Disposal Service. Each of these is headed by a Commissioner with the exception of the National Archives and Records Service, which is headed by the Archivist of the United States.

GSA Standardization Activities. The standardization activities of GSA apply not only to real and personal property but also extend into certain aspects of standardization of management practices and procedures. Relating this to the six operating services, it follows that the basic elements for design and the types of

materials to be used follow standardized practices for utilizing and operating buildings, insofar as these involve Federal buildings and public works under GSA's program. Standardized methods and procedures for handling records also are established by GSA. This coordination contributes much to overall standardization and the attainment of one of the principal objectives of the Act.

Office of Standards and Quality Control of Federal Supply Service (FSS). The GSA standardization program for materials, supplies, and equipment procured by the Federal Government is centralized in the Office of Standards and Quality Control. This Office provides nationwide leadership in the development and execution of the programs of FSS concerned with commodity control. These programs include: (a) development and maintenance of Federal Specifications and Standards; (b) standardization of commodities procured by the Government; (c) coordination of Governmental standardization activities; (d) development and maintenance of the Federal Catalog System; (e) inspection and testing of supplies procured under GSA contracts; and (f) coordination of participation by GSA technical personnel in activities of nationally recognized technical societies and standardizing bodies.

Federal Specifications and Federal Standards. High on the list of progressive steps in commodity standardization is the GSA regulation on Federal Specifications and Standards and the recently issued GSA Federal Standardization Handbook which fill a long-time need for a Government-wide statement of policies and procedures for the development and use of specifications and standards covering items of common use in the Federal Government.

Specifications and standards must reflect the best technical knowledge and experience of Government and industry, be responsive to technological advances, provide an efficient and economical medium for filling the procurement needs of Federal agencies, and make it easier for manufacturers to fill Government orders from their normal commercial production. Specifically included in the GSA Federal Standardization Handbook are the policies and procedures to be followed by all Federal agencies in the preparation of specifications and standards to meet these high objectives.

The Federal Specifications Board and its 77 subsidiary Technical Committees were abolished in 1952. The Board's work was recognized as competent and authoritative. However, a need was felt for greater speed and flexibility in the preparation of new and revised specifications in order to keep ahead of a fast-moving supply machine. To solve this need, the "assigned agency" method of developing new Federal Specifications and revising and amending existing ones was adopted. This method provides the facility whereby, under GSA's leadership, the wealth of experience and ability of technical personnel of Federal agencies and industries are utilized in maximum degree. Under the assigned agency method, Federal agencies are given responsibility for development of specifications and standards projects for which they have specialized knowledge. As agencies accept assignments, specifications and standards projects are carefully coordinated to meet the most pressing needs of agencies.

Also, Interim Federal Specifications were introduced in such a

way as to provide urgently needed temporary specifications for immediate use. This change has resulted in doubling the annual output of new Federal Specifications, and has accelerated the job of keeping existing specifications up to date.

To accomplish GSA's standardization objectives, provision had to be made to limit procurements to standard items. Federal Standards do this job. They are of five types—(a) Supply Standards: Of these, the limitation standard is significant; it limits procurements to those qualities, types, and sizes of supply items which most economically and effectively satisfy the needs of using agencies. For example, the Standard on Typewriter Ribbons (No. 194) reduced the varieties of ribbons from the 68 previously bought to 34 covering ribbons for all makes of typewriters. (b) Test Method Standards: There are more than a dozen of these documents. They appear as large compilations of widely coordinated test methods covering as many different product or commodity areas. For instance, Federal Test Method Standard No. 791, Lubricants, Liquid Fuels and Related Products, brings together the whole category of Test Methods in the field which it covers. It adopts to a great extent the ASTM test methods. The looseleaf arrangement of the individual test methods permits ready revision. This standard reflects agreement and uniformity between Government, suppliers, and industrial users of standard test methods. (c) Material Standards: As an example, Federal Standard No. 66 specifies the chemical composition and hardenability characteristics of steel. (d) Engineering Standards: The Engineering Standard is typified by No. 245 which provides uniform dimensions for aluminum and magnesium wrought products for use throughout the Government. (e) Procedural Standards: Federal Standard No. 5 provides the necessary instructions for preparation of Federal item descriptions so that supply items which will enter a supply system will be cataloged before the item actually enters the system.

Promulgation of Federal Specifications and Standards by GSA. Federal Specifications and Standards are promulgated by GSA. Before approval and promulgation, GSA reviews them to assure that the comments of Federal agencies and suppliers have been properly incorporated or reconciled. In some instances, it is necessary for the assigned agency, as discussed above, or GSA, to hold conferences with agencies and industry in further development before the specification or standard is ready for promulgation for mandatory use.

Although the responsibility for developing Federal and Interim Federal Specifications and Standards is in some cases assigned to Federal agencies with their consent, GSA has sole promulgation authority for them.

The recommendations of Federal agencies and of industry on the need for amending or revising specifications are most helpful to GSA in doing this job. In this connection, suppliers are encouraged to recommend substitute items offering the same or better service at lower cost than those covered in existing specifications. Consideration can then be given specification revisions for future invitations to bid.

Use of Industry Standards in Federal Specifications and Stan-

dards. GSA uses recognized industry and technical society standards in formulating Federal Specifications and Standards. As an example, coordination with industry and Government resulted in the adoption of eight industrial methods of testing glassware. The industrial methods are referenced in a Federal test-method standard, rather than being reprinted. In the field of metallurgy 31 standard methods of testing metals are combined into one Federal Standard (No. 151).

Use of Federal Standards by Industry. The United States of America Standards Institute has adopted the Federal Standard for X-Ray Tube Focal Spot, Method of Measurement. Prior to the establishment of this standard, there was no commonly accepted method of measuring the performance of diagnostic x-ray equipment. State governments also have shown a vital interest in supply standardization by adopting in whole or in part more than 1500 Federal Specifications that were recommended for use by the National Association of State Purchasing Officials.

Federal Cataloging Program. Public Law 152 stipulates that a uniform commodity classification, the uniform stock numbers, and item identification descriptions are to be used in all applicable supply activities of Federal agencies. The military departments have completed the stock numbering and identification of all military supply items and have used the Federal Catalog System exclusively in all their supply activities since December 1958.

GSA has cataloged all of the items in Stores Stocks and Federal Supply Schedules which it procures for agencies. The items which civil agencies procure directly from suppliers have for the most part also been brought into the Federal Catalog System. This system has eliminated the confusion of many different systems of stock numbering identifying civil agency items, thus providing a single basis upon which the functions of requisitioning, procurement, storage, issue, and utilization can be handled without the confusion of differing numbers, differing item names, and varying description characteristics.

Too much emphasis cannot be placed upon the significance of the Federal Catalog Program. Every phase of supply administration requires the facility of a uniform identity for each individual supply item. Thus, requirements planning, requisitioning, procurement, warehousing stores issue, utilization, and disposal sales are simplified, expedited, and effectively handled.

The Federal Supply Classification makes possible the organization of supply information, reports, programming, and financial and inventory control on a comparable basis not heretofore possible. This, combined with the standardization identification number and description, enables the buyer and seller to speak the same language in all dealings, from procurement to utilization and disposal.

To obtain full benefits of standardization, it was essential that all items used by Federal agencies be uniformly identified under the Federal Catalog Program. Since all existing items are now uniformly identified, standardization can go the whole distance by eliminating the unnecessary and wasteful items from the supply system and keep current with the new or revised standards required by technological changes.

Automotive Standards. With the enactment of Public Law 88-515 on August 30, 1964, GSA was required to develop standards for passenger safety devices for motor vehicles purchased by the Federal Government, to exclude certain vehicles designed for military field training, combat, or tactical purposes. Pursuant to this Act, Federal Standard No. 515, Standard Safety Devices for Automotive Vehicles, was issued June 30, 1965, effective September 28, 1966. Public Law 88-515 also makes provision for changes in the standard. This is a continuing effort to achieve the highest practical degree of uniformity and standardization for reasonable passenger safety devices for Federal Government motor vehicles. Many of these standard safety devices have been adopted by the automotive industry for universal application.

Quality Control. The Federal Supply Service is a quality conscious organization that attunes its supply services to the individual requirements of a wide variety of customer agencies. Quality Control has a vital role in assuring that material supplied is in compliance with contract specification requirements. This assurance is obtained through inspection at origin and destination, and through operation of a Quality Assurance program.

Shipments of high dollar value are inspected in the supplier's plant. This has the advantage of requiring the supplier to correct any defects that are found before the material can be moved out of the plant. It is also more efficient, if material from one production lot is being shipped to several destinations, to perform one inspection at the supplier's plant rather than inspect at each of ten or more possible locations. Before performing origin inspection, the quality control representative becomes familiar with the quality requirements of the contract, purchase order, and applicable governing specifications. He inspects the material for all the characteristics specified, and if necessary, selects a sample to be sent to the Quality Control Laboratory for testing.

Low-value shipments of material for stores stock replenishment are inspected as they are received in GSA depots. Complex items are inspected by Quality Control for all specified characteristics, and laboratory tests are performed as required. If material is rejected, it is returned to the supplier at the supplier's expense. Shipments of brand name items and other items of very low value, where health or safety is not a factor, may be examined by receiving clerks in the depots instead of being given a complete inspection by Quality Control. Materials which were inspected at origin require no further inspection at depots and may move directly to final storage locations.

Any material in stock in GSA depots which is likely to deteriorate while in storage, is inspected periodically by Quality Control to determine whether it is still suitable for issue. This includes such items as paint, adhesives, typewriter ribbons, and rubber products.

Quality assurance, as implemented by the Federal Supply Service, is a method of reduced Government inspection which makes maximum utilization of the quality control systems of suppliers who have excellent quality control and past performance records. It provides that suppliers approved for placement under quality assurance procedures may release materials for shipment under

the certification of an official of the company, thus eliminating the necessity for the release by Federal Supply Service quality control representatives of each shipment of materials under contract. As a substitute for Government lot-by-lot inspection, it provides for periodic surveillance inspection visits by the quality control representative to verify the supplier's quality control over vendor materials, manufacturing processes, products produced, and packaging, packing and marking. This procedure reduces the Government inspection and testing time to the minimum required to provide the Government assurance of receiving materials that completely conform to contract specifications and standards requirements.

Quality Control in coverage of contracts, is complete as to sampling, inspection, and testing. In addition, it maintains field contract management assistance to the Office of Procurement under all contracts for which it performs origin inspection. Statistical sampling techniques are used to determine the number of samples to select from a given lot to assure maintenance of a specified quality level. Most Federal and Military specifications reference sampling plans from MIL-STD-105D.

There is a Quality Control function in each of the ten GSA regional offices to assure that GSA processes through its supply system a high quality of supplies and materials that will completely satisfy the requirements of the agencies it services. Nine of these ten regional Quality Control functions have acceptance testing laboratories which are staffed with chemists, chemical engineers, and mechanical engineers, who have had long experience in testing to the requirements of Federal and Military Specifications and Standards, and other commercial standards, such as ASTM, AOAC, Department of Commerce Commercial Standards, and others.

In addition to acceptance testing, these laboratories have proven to be a valuable source for feedback information to the Federal Supply Service's Standardization Division in updating Federal Specifications and for verifying the reliability of test methods proposed in Interim Federal Specifications. The laboratories are also performing qualification testing for some of the Federal Specifications that provide for Qualified Products Lists.

Emphasis is placed on requiring GSA suppliers to control the quality of supplies they submit for acceptance. In this respect, as in many others, GSA's quality control operations are very similar to the Department of Defense's inspection and quality control activities. A paragraph is placed in Part 4 of all Federal Specifications covering supplier responsibility which states that the supplier is required to perform all inspection and tests contained in the specification.

INTERDEPARTMENTAL SCREW THREAD COMMITTEE, John R. Rees, Secretary, National Bureau of Standards, Washington, D. C. 20234

This Committee replaces the National Screw Thread Commission which was established by an act of Congress in 1918. The ISTC is responsible for: (1) recommending to appropriate activities research and development efforts relating to screw threads;

(2) developing standards for screw threads; (3) participating in the development of standards for gages, dies, taps, and other items associated with the manufacture and use of interchangeable threaded parts employed by Government agencies; and (4) providing advisory services on science, technology, and standards of practice as these relate to screw threads.

Standards approved by the ISTC are published in National Bureau of Standards Handbook H28, Screw-Thread Standards for Federal Services.

The membership of the ISTC consists of representation from the National Bureau of Standards, U. S. Department of Commerce; the Departments of Defense, Army, Navy, and Air Force; and industry. The industry members are chosen so as to be representative of both manufacturers and users of threaded products.

The ISTC works closely with Sectional Committee B1 of the United States of America Standards Institute. Sectional Committee B1 is concerned with the standardization and unification of screw threads and may well be considered the industry counterpart of the ISTC. Industry representatives on the ISTC are also members of Sectional Committee B1, as are many of the Government members.

JOINT COMMITTEE ON PRINTING, CONGRESS OF THE UNITED STATES, Hon. Carl Hayden, U. S. Senate, Chairman, Washington, D. C. 20510

The Joint Committee on Printing (JCP) has, among other functions, the responsibility for establishing standards and specifications for papers used in public printing and binding. For that purpose, the JCP established its Committee on Paper Specifications. Mr. John F. Haley is Chairman of that committee, which also includes representatives of the Government Printing Office; the General Services Administration; The Departments of Commerce, Army, Navy, and Air Force; and the Defense Supply Agency.

The JCP has published specifications for 83 varieties of printing papers and boards in "Government Paper Specification Standards," which also includes appropriate testing and color standards. These standards are mandatory upon the U. S. Government unless otherwise authorized by the JCP.

NATIONAL CONFERENCE OF STANDARDS LABORATORIES, c/o J. R. Van de Houten, Aerojet-General Corporation, Department 1770, Building 2002A, P. O. Box 1947, Sacramento, California 95809

This group is a nonprofit organization of standards and calibration laboratories, in industry, education or government, sponsored by the National Bureau of Standards, which promotes cooperative action on common problems of management and operations. Liaison relations are maintained with EIA, ASTM, IEEE, AIAA, AOA, ASQC, USASI, AIA, ISA and SAMA. Its committees of Members' Delegates, under the guidance of an 11-man Board of Directors, formulate voluntary standards of practice for the guidance of members, study the calibration needs of science and industry, conduct measurement agreement comparisons,

publish a Directory of Standards Laboratories and available services, hold periodic workshops and Conferences, compile a library of calibration procedures, and establish performance criteria for measurement standards and instruments.

NATIONAL CONFERENCE ON WEIGHTS AND MEASURES, M. W. Jensen, Executive Secretary, National Bureau of Standards, U. S. Department of Commerce, Washington, D. C. 20234

The Conference, sponsored by the National Bureau of Standards, is composed primarily of State, county, and city weights and measures officials, who constitute the "active" membership. It includes also, as "advisory" members, representatives of the Federal Government who are concerned in any way with regulatory weights and measures officers or their official activities, or who are interested in the objectives and activities of the Conference. A third membership category, "associate members," comprises representatives of manufacturers of commercial weighing and measuring devices, business, industry, railroad, and industrial weighing and scale departments, consumers, and others interested in the objectives and work of the Conference.

The Conference meets annually to consider various problems arising in connection with weights and measures administration; to promote efficiency and uniformity in laws, rules, specifications, tolerances, and methods of supervision and test; and to coordinate activities of State and local weights and measures officials.

In the development of codes and specifications, tolerances, and regulations for commercial weighing and measuring devices, the National Bureau of Standards cooperates closely with the Conference Committee on Specifications and Tolerances. As necessity arises, these codes are modified, and new codes are formulated, thus keeping the entire group in line with changing conditions of the trade and with the developments of the equipment industry.

The Conference codes are published by the National Bureau of Standards and generally are officially promulgated by the States as published. The reports of the proceedings of each annual meeting of the Conference also are published by the Bureau.

The Conference has adopted a Model State Law on Weights and Measures, several model regulations, and from time to time endorses standard methods of test for commercial apparatus.

The Conference has been effective in bringing about a gratifying degree of uniformity and mutual cooperation among the States in the matter of weights and measures supervision.

RANGE COMMANDERS COUNCIL, INTER-RANGE INSTRUMENTATION GROUP, Vernon L. Miller, Chairman, Steering Committee, White Sands Missile Range, New Mexico 88002

The Inter-Range Instrumentation Group (IRIG) is active in standardization of systems, equipment, and processes in fields related to missile test range instrumentation. Specific areas of concern to the IRIG include: Electronic tracking systems (radar, etc.); optical telescopes, cinetheodolites, ballistic cameras, television, etc.; telemetry systems; communications systems (voice and data); time generation and distribution equipment; command and

control systems; frequency regulation; computers and related data conversion and formatting equipment; miss-distance measuring systems; meteorological systems; photographic processing methods and equipment; data processing methods; electromagnetic propagation theory and effects; and missileborne electronic and optical beacons.

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