

NAT'L INST. OF STAND & TECH
A11106 180507

NIST
PUBLICATIONS

REFERENCE

NISTIR 6960

*Standardization and Conformity Assessment
in the Republic of Korea*

Gum Ho Choe

QC
100
.456
#6960
2003

NIST
National Institute of Standards and Technology
Technology Administration, U.S. Department of Commerce

NISTIR 6960

*Standardization and Conformity Assessment
in the Republic of Korea*

Gum Ho Choe
Standards Services Division
Gaithersburg, MD 20899-2100
National Institute of Standards and
Technology

February 2003



U.S. DEPARTMENT OF COMMERCE
Donald L. Evans, Secretary
TECHNOLOGY ADMINISTRATION
Phillip J. Bond, Under Secretary of Commerce for Technology
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
Arden L. Bement, Jr., Director

ABSTRACT

This report describes the national standardization and conformity assessment system in the Republic of Korea. To the extent possible, efforts have been made to provide a comparison of U.S. entities with Korean entities.

Though a general overview of the Korean standards and conformity assessment system is provided in this report, most contents in this report pertain to activities carried out by the Korean Agency for Technology and Standards (KATS) of the Ministry of Commerce, Industry and Energy. KATS serves as the Korean national standardization body.

Key words: conformity assessment; Korea; KATS; Korean Industrial Standards; standardization.

Table of Contents

	Page
Abstract	iii
List of Figures	vii
List of Tables	viii
1. Introduction	1
1.1 Background	1
1.2 Objectives and Scope of this Report	1
1.3 General Information on Korea	1
1.4 Brief History of Korea's Industrial Standardization	4
2. National Standards Strategy	5
2.1 Laws and Standards Policy	5
2.1.1 National Standards Act	5
2.1.2 National Standards Policy	8
2.2 Korean Agency for Technology and Standards (KATS)	9
2.2.1 History	9
3. Introduction on Korean Industrial Standards (KS)	11
3.1 Organizations and their Functions in Industrial Standardization	11
3.2 Korean Industrial Standards (KS)	12
3.2.1 Introduction	12
3.2.2 Procedure for Establishing and Revising the KS	13
3.2.3 Industrial Standards Committee	15
3.2.4 Harmonization with International Standards	15
3.3 KS Marking System	16
3.3.1 Introduction	16
3.3.2 Technical Requirements	17
3.3.3 Certification Body	18
3.3.4 Product Certification Scheme	19
3.3.5 Use of Mark of Conformity	23
3.3.6 Misuse of a Mark of Conformity	24
3.3.7 Support to KS Marked Products	25
3.4 Participation in Global and Regional Standardization	26
3.5 Bilateral Cooperation with Foreign Institutes	27
4. Conformity Assessment System managed by KATS	30
4.1 Laboratory Accreditation	31
4.1.1 Mission and Structure of KOLAS	31
4.1.2 KOLAS Accreditation Fields	32
4.1.3 Procedures and General Requirements of KOLAS	34
4.1.4 Status of Accredited Laboratories	34

4.2	Korea Accreditation Board	35
4.3	Voluntary Certification Scheme other than KS operated by KATS	36
4.3.1	NT(New Technology)	36
4.3.2	EM(Excellent Machinery, Mechanism and Materials)	36
4.3.3	GR(Good Recycled)	36
4.3.4	Assessment and Certification on Reliability	36
4.3.5	Quality Certification for Environmental Equipment	37
4.4	Mandatory Certification Scheme operated by KATS	37
4.4.1	Safety of Electric Appliances	37
4.4.2	Safety of Consumer Products	38
4.5	Legal Metrology	39
4.6	Mandatory Certification Schemes by other Ministries in Korea	39
5.	Facilitation of Trade through International Standards and Conformity Assessment	39
5.1	WTO/TBT related Activities	39
5.2	Trade Information Service	40
6.	Summary	41
	Index of Acronyms	42
	Appendix	
1.	National Standards Acts	43
2.	Summary of ‘Consolidated Public Notice’	53
	Endnotes	59
	Bibliography	60

List of Figures

		Page
Figure 1.1	Structure of the Executive Branch of the Government of the Republic of Korea	2
Figure 1.2	Comparison of U.S. Commerce-related Government Agencies	3
Figure 2.1	Three Basic Laws	5
Figure 2.2	Components of the Korean National Standards System	7
Figure 2.3	The National Standards Policy	8
Figure 2.4	The Organization of KATS	10
Figure 3.1	The Procedure for the Establishment of the KS	14
Figure 3.2	Participation in ISO and IEC TCs and SCs Combined	27
Figure 4.1	Structure of the Conformity Assessment System in Korea	30
Figure 4.2	Structure of KOLAS	32
Figure 4.3	Fields of Accredited Testing Laboratories	34
Figure 4.4	Fields of Accredited Calibration Laboratories	35

List of Tables

		Page
Table 1.1	History of Korean Standards	4
Table 2.1	Former Names of KATS	9
Table 2.2	Public Sector Testing Laboratories	10
Table 3.1	Present Status of the KS Standards	12
Table 3.2	Annual Numbers of the KS	13
Table 3.3	Industrial Standards Committee	15
Table 3.4	Status of KS Certification	17
Table 3.5	Korea`s Participation in International Organizations	26
Table 3.6	Status of Cooperation with Foreign Countries	28
Table 4.1	List of Regulated Products	37
Table 5.1	WTO/TBT Activities Carried Out by KATS	40

1. Introduction

1.1 Background

The Korean Agency for Technology and Standards (KATS) is a government agency that oversees industrial standardization and the conformity assessment system in the Republic of Korea. KATS is primarily responsible for: the establishment of Korean national standards (KS) and promotion of their use; the management of the national conformity assessment infrastructure; the control of the legal metrology system; the safety control of electrical appliances and consumer products; and the promotion of quality and technical innovation.

In May 2000, KATS / Ministry of Commerce, Industry and Energy (MOCIE) of the Republic of Korea and the National Institute of Standards and Technology (NIST) / Department of Commerce (DOC) of the United States of America signed a Memorandum of Understanding (MOU) in the area of standardization, conformity assessment and legal metrology.¹ The author was named by KATS to serve as a Guest researcher and to prepare this report as one of the agreed upon cooperative activities under the MOU.

1.2 Objectives and Scope

In terms of 2001 trade, Korea was the sixth largest market for U.S. products and the U. S. was the largest market for Korean products.^{2,3} This report provides information on the Korean standardization and conformity assessment system with a view to facilitating trade between Korea and the United States. This information should be useful for U.S. importers, exporters, and standards or conformity assessment organizations in their dealing with Korean counterparts.

The report provides a brief introduction on the current Korean national standards strategy and the role of the Korean Agency for Technology and Standards in its operation and management of the Korean national standards system. It also discusses Korean conformity assessment activities, including the KS marking scheme and conformity assessment system.

1.3 General Information on Korea

General information on the Republic of Korea may be found at (<http://www.korea.net>). Information on the government structure of Korea is included in this section.

¹ Memorandum of Understanding between the National Institute of Standards and Technology and the Korean Agency for Technology (May 9, 2000)

² International Trade Administration (ITA) / Department of Commerce (DOC). Homepage, Export Statistics Express < <http://ese.export.gov/ITA2002/>>

³ Ministry of Commerce, Industry & Energy (MOCIE) Homepage, No 76 Export and Import in 2001, January 17, 2002 <<http://www.mocie.go.kr/eng/news/>>

Executive Branches

Under Korea's presidential system, the President carries out his executive duties through the State Council. The Council is made up of 15 to 30 members and chaired by the President. The President is responsible for deciding all important government policies. The Prime Minister is appointed by the President and approved by the National Assembly. As the principal executive assistant to the President, the Prime Minister oversees 18 administrative ministries and manages the Office for Government Policy Coordination under the direction of the President. The structure of the Executive Branch of the government of the Republic of Korea is shown in Figure 1.1.

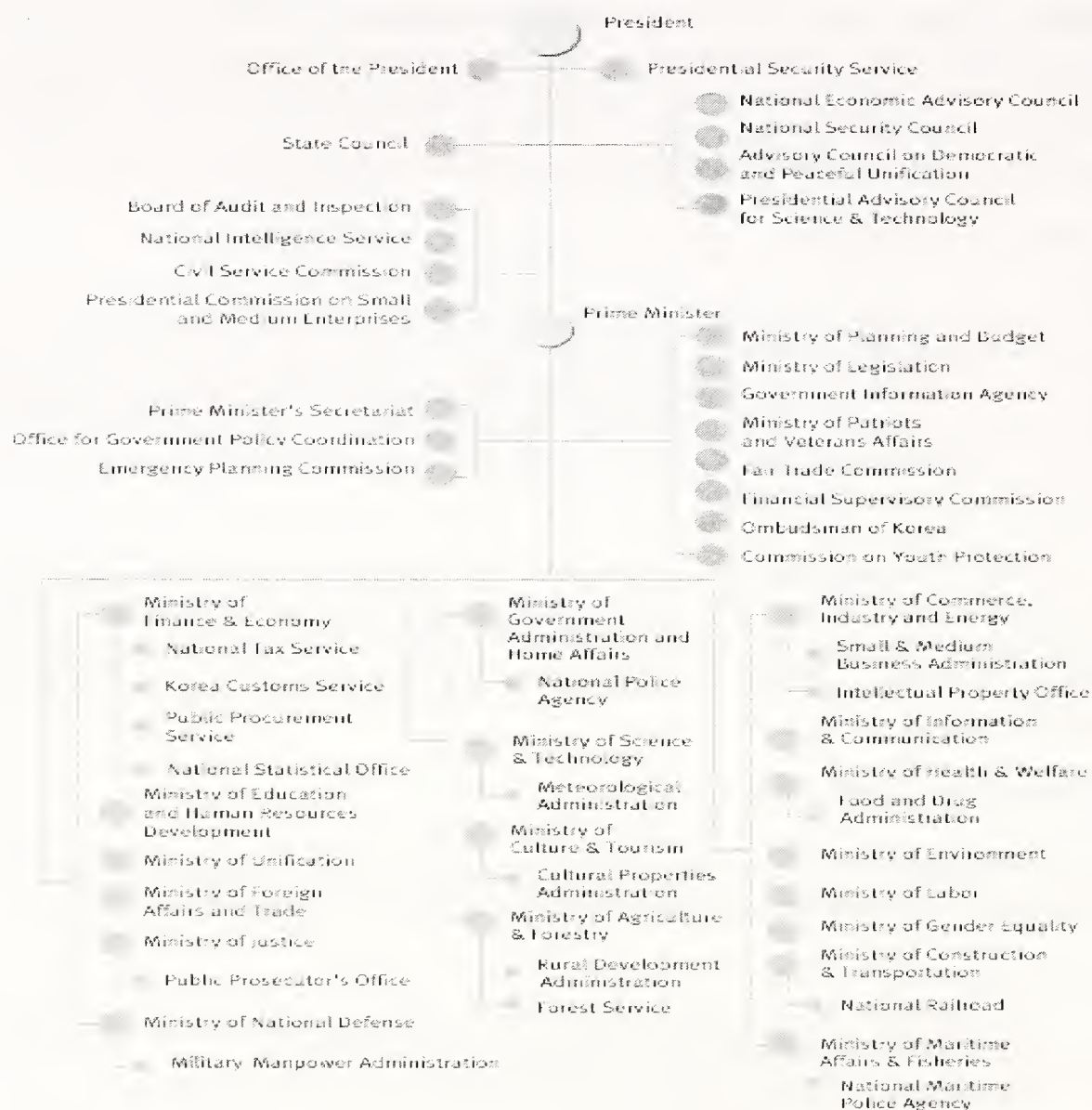
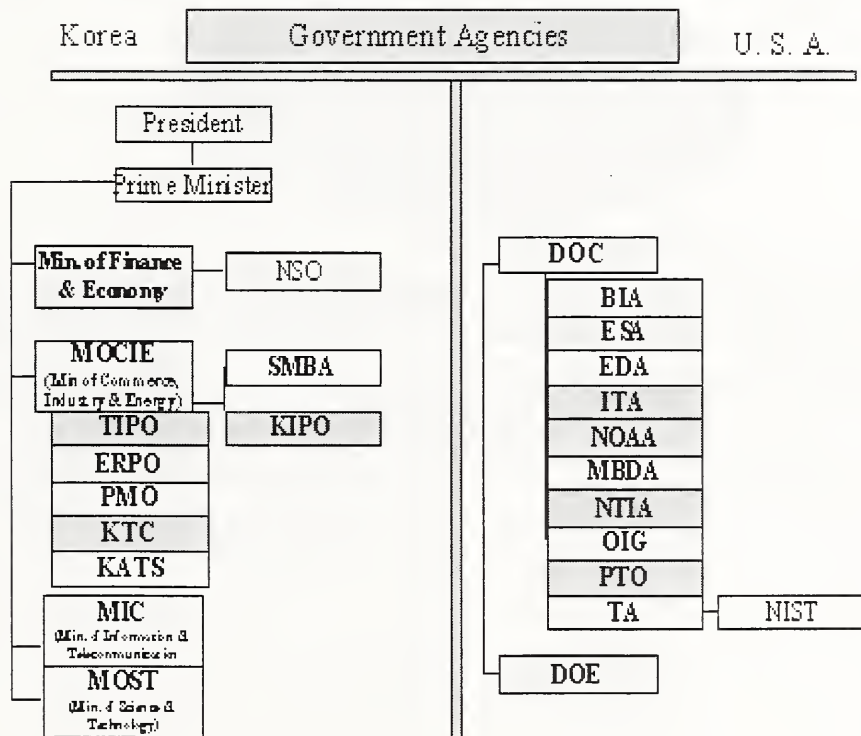


Figure 1.1 Structure of the Executive Branch of the Government of the Republic of Korea

Comparison of Commerce-related Ministries with those in the U.S.

The Ministry of Commerce, Industry, and Energy (MOCIE: <http://www.mocie.go.kr>) has a similar mission to the U. S. Department of Commerce (DOC)⁴, but it also has other mandates which are similar in scope to those of the U.S. Department of Energy (DOE). In Korea, some of activities carried out by DOC are assigned to various ministries other than MOCIE. For example, international trade is handled by the Ministry of Foreign Affairs and Trade (<http://www.mofat.go.kr>); statistics is handled by the Ministry of Finance and Economy (<http://www.mofe.go.kr>); and weather forecasting is handled by the Ministry of Science and Technology (MOST: <http://www.most.go.kr>).

The Korean Agency for Technology and Standards is under the Ministry of Commerce, Industry and Energy, similar to the placement of NIST under DOC. KATS' responsibilities are similar to those of NIST.



* See Index of Acronyms

Figure 1.2 Comparison of Commerce-related Government Agencies

⁴ Department of Commerce (DOC) Homepage

1.4 Brief History of Korea's Industrial Standardization

A comprehensive industrial standards system began when the Industrial Standardization Act (ISA) was enacted in 1961. With this Act, consensus based standards development was first introduced to Korea: a governmental national standardization body (then the Bureau of Standards in the Ministry of Commerce and Industry) was designated to establish Korean national standards (Korean Industrial Standards, KS) through the Industrial Standardization Committee. At about the same time, a voluntary product certification scheme was established for the KS system. Under this system the national standardization body issued "licenses" to the manufacturers who demonstrated ability to make products in conformance with relevant KS and licensing criteria. The Korean Standards and the marking scheme contributed greatly to Korea's rapid economic growth in the '60s and the '70s. The Act has been revised eleven times since 1961, but the basic structure remains the same as the original one. One of the major revisions was in the 1980s, when the marking scheme became available to foreign industries. And in the late 1990s, the marking scheme was revised so that the "licensing" scheme became "certification", and a non-government certification body, which was designated by the NSB, conducted the certification activities. And in 1999, the National Standards Act (NSA) was enacted to further support the national standards system. This history is summarized in Table 1.1.⁵

Table 1.1 History of Korean Standards

History of Korean Standards			
1960-70's	1980's	1990's	2000-
<p>Weights & Measures Act (1961.5)</p> <p>- Legal metrology & Measures standardization</p> <p>Industrial Standardization Act (1961.9)</p> <p>- Introduction of KS Marking Certification, simplification order system</p>	<p>Opening up of KS Marking system to foreigners</p> <p>Entrusting matters on industrial standards for processed food-stuff of agricultural, marine & livestock product to the Ministry of Agriculture & Forestry</p>	<p>Introduction of Quality & Environment Management System</p> <p>Introduction of KS certification by private body</p> <p>National Standards Act (1999.2)</p>	<p>Implementation of Global Standards</p> <p>- 5 year Plan</p> <p>* Rate of Alignment 30% → 80%</p> <p>Strengthening of Cooperation with Organization of Standard and Laboratory Accreditation</p>

⁵ White paper on Technology and Standards in Korean (2002)

2. National Standards Strategy

2.1 Laws and Standards Policy

2.1.1 National Standards Act

There are three basic laws that provide fundamental requirements and information on standardization and conformity assessment in Korea. One of these Acts, the National Standards Act (NSA), established in 1999, includes the definitions of standards and conformity assessment, as well as the government's role in promoting international harmonization and reduction of unnecessary duplication in standards-related activities.

This section is focused on the NSA in terms of general provisions, such as its establishment, the advancement of the national standards system, and the management of the measurement standards system. The full text of the National Standards Act is provided in Appendix 1. The other two laws, the Industrial Standardization Act and the Weights and Measures Act, are briefly described in sections 3.1.1 and 4.3.2 of this report, respectively.

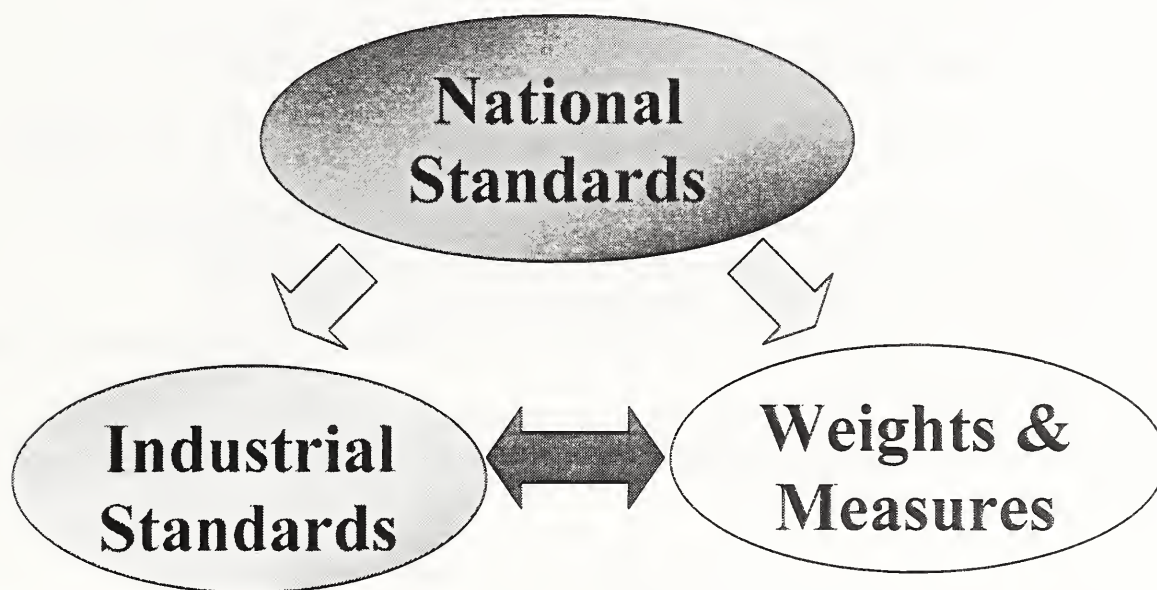


Figure 2.1 Three Basic Laws

General Provisions of the Act

The general provisions of the Act include three articles: objectives, application, and definition of terminology.

The objectives of the NSA, as outlined in Article 1, are:

- to facilitate technological innovations;
- to improve industry's structure and to support a transition to an information society; and,
- to promote the national competitiveness and public welfare.

The NSA applies to all social and economic activities that are affected by science and technology, as outlined in Article 2. Typical terminology is outlined in Article 3, and deals with standards, legal metrology, and conformity assessment.

National Standards Council

The NSA stipulates the establishment and operation of the National Standards Council (NSC). The NSC is overseen by the Prime Minister and is in charge of the basic plan of the national standards system and for coordinating responsibilities among the Ministries concerned. The NSC consists of up to 15 members, including a Chairperson. The NSC's members include the relevant Minister(s), the President of the National Measurement Standards Institution, and those appointed by the Prime Minister based on their expertise in standards, science and technology. The Minister of Commerce, Industry and Energy serves as the NSC Secretary.

The functions of the Council are to review and coordinate:

1. the basic plan of the national standards system and the national policy on national standards;
2. cooperative activities with international and foreign standards organizations;
3. R&D activities and dissemination of technology related to standards;
4. programs for the establishment of the conformity assessment system;
5. systems and regulations relevant to measurement standards, reference standards, and documentary standards;
6. harmonization of national standards with international standards; and
7. other matters related to the national standards system as prescribed by Presidential Decree.

Regarding the basic plan of the national standards system, the government is mandated to work out the basic plan of the national standards every five years. The plan is developed by the Minister of Commerce, Industry and Energy based on other Ministries' plans. The NSC then reviews the final plan.

The Plan is required to address such issues as: the establishment, maintenance, and management of the national standards system with an emphasis on measurement standards; the maintenance, development, and mutual compatibility of standards-related documents throughout the government; R&D of the standards-related science and technology; mutual recognition agreements with other countries; and, cooperation with international organizations.

The Plan is accompanied by Action plans, which are to be prepared and executed every year by relevant ministers.

Advancement of the National Standardization System

Articles 10 through 18 of the Act focus on the international system of units (SI), the national calibration system, reference materials and standards, legal metrology, and industrial standards. Article 10 describes base units such as meters, kilograms, seconds, kelvins, candelas, amperes, and moles. Article 11 introduces derived units formed through products and combinations such as square meters, meter per second, etc. The role of the national institute of measurement standards, i.e., the Korean Research Institute of Standards and Science (KRISS : <http://www.kriss.re.kr>), is mentioned in Article 13. Under Article 14, MOCIE is assigned the responsibility to designate national calibration laboratories to establish and maintain the national calibration system. Articles 15, 16 and 17 deal with reference materials and standards, legal metrology, and industry standards. The components of the national standards system are depicted in Figure 2.2.



Figure 2.2 Components of the National Standardization System

Operation and Management of the National Standardization System

This section of the publication discusses overall management of the various components of the National Standards System. These components include: documentary standards;

product certification; accreditation of test and inspection laboratories; quality management systems; environmental management systems; mutual recognition of conformity assessment results; and, international cooperation. Documentary standards are developed and maintained in: industrial fields; information and communications fields; and environmental, health and safety fields. All standards should be developed in harmonization with international standards. The conformity assessment portion of the National Standards Act provides legal grounds for: establishment of a product certification system; accreditation of calibration laboratories, testing laboratories and inspection bodies; quality and environmental management certification systems; and recognition of conformity assessment results. These activities are carried out in accordance with international guides and standards.

2.1.2 National Standards Policy

Korea developed its 2000 National Standards Basic Plan under the National Standards Act. The plan has three objectives: to accelerate the establishment of the national standardization system by focusing on transparency and customer needs in standards development; to enhance synergies of existing governmental and private partnerships; and to improve standardization workflow by adopting information technology. The plan also calls for promoting international standards activities within Korea. Strategic collaboration with other countries is also strengthened through Korea's participation in memoranda of understanding (MOU) and multilateral recognition arrangements (MLA) on standards and conformity assessment. One of the major goals of the Plan is to facilitate trade between Korea and its trading partners by emphasizing harmonization of its national conformity assessment system with international norms. A summary of national standards policies is illustrated as shown in Figure 2.3.

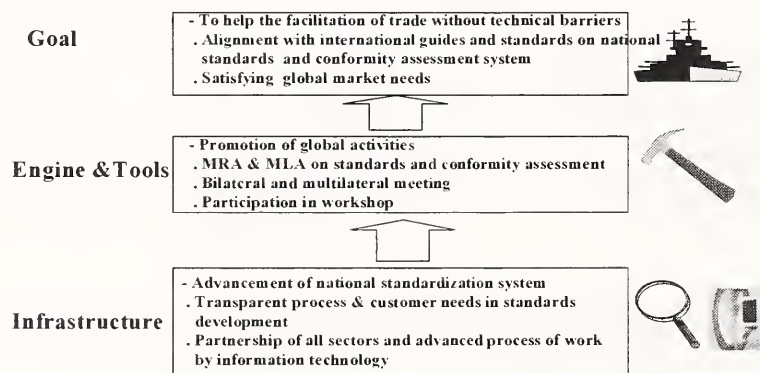


Figure 2.3 National Standards Policy

2.2 Korean Agency for Technology and Standards (KATS)

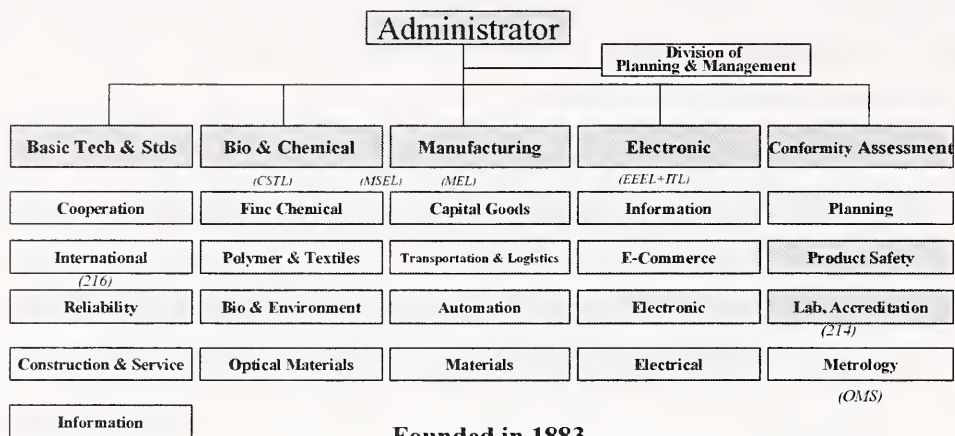
2.2.1 History

KATS was first established as the Analysis and Testing Laboratory of the Mint Office in 1883, under the Chosun Dynasty. Since then it has renamed to reflect changed responsibilities. The former names of KATS are listed in Table 2.1. KATS is currently the national standardization body of Korea.

Table 2.1 Former Names of KATS

Year	Name
1883	Analysis and Testing Laboratory of the Mint Office
1912	Central Testing Institute under the Ministry of Agriculture, Commerce and Industry
1945	Center Industrial Research Institute under the Ministry of Trade And Industry
1973	National Industrial Standards Testing Institute under the Industrial Advancement Administration
1976	National Industrial Testing Institute under the Industrial Advancement Administration
1991	National Industrial Technology Institute under the Industrial Advancement Administration
1996	National Institute of Technology and Quality under the Small and Medium Business Administration
1999	Korean Agency for Technology and Standards (KATS) under the Ministry of Commerce, Industry and Energy (MOCIE)

There are five departments within KATS. The Department of Basic Technology & Standards and the Bureau of Conformity Assessment deal with policy-related issues, such as oversight of the national standardization system; managing the KS marking scheme; representing Korea in international organizations, such as the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), the International Laboratory Accreditation Cooperation (ILAC), the International Organization of Legal Metrology (OIML), and the International Accreditation Forum (IAF); operating a TBT inquiry point for industrial products; managing the legal metrology system; and providing safety controls for electric and electronic equipment and consumer products. The other three departments focus on standards developments and related research activities.



Founded in 1883
Total Employees : 235
(Researchers : 117)

Figure 2.4 Organization of KATS

The function and responsibilities of KATS have changed in recent years. In the 1990's, the role of testing at KATS decreased dramatically and was handed over to the public and private sectors. KATS still provides information to domestic and foreign customers on where they can obtain test services. In this area, seven public testing laboratories cooperate with KATS. Major testing fields and the Uniform Resource Locator (URL) of each of these laboratories are shown in Table 2.2.

Table 2.2 Public Sector Testing Laboratories

Name	Fields	Internet URL
FITI Testing & Research Institute	Textiles	www.fiti.re.kr
Korea Testing and Research Institute For Chemical Industry	Chemical products	www.kotric.or.kr
Korea Electric Testing Institute	Electrical appliances	www.keeti.re.kr
Korea Merchandise Testing & Research Institute	Sports, toys, and subsistence goods	www.komtri.re.kr
Korea Institute of Construction Material	Concrete, etc	www.kicm.re.kr
Korea Machinery Meter and Petrochemical Testing and Research Institute	Machinery & petrochemical products	www.mpi.or.kr
Korea Apparel Testing & Research Institute	Yarns, clothes	www.katri.re.kr

3. Introduction to Korean Industrial Standards (KS)

The Industrial Standardization System in Korea is outlined under the Industrial Standardization Act, which was enacted in 1961. The act has been revised eleven times since then; however, the basic structure remains the same as the original one. The main tasks outlined in the Act pertain to the development of Korean Industrial Standards (KS standards) and dissemination of these standards to Korean industry.⁶

To ensure the conformity of products to KS standards, KATS oversees the KS Marking System. A detailed description of the KS system is given later in section 3.2.

KATS also represents Korea in international standardization organizations, such as the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). As a Member of the World Trade Organization (WTO), Korea helps facilitate free trade by eliminating unnecessary technical barriers to trade. KATS accomplishes this through active participation in international standardization activities and by harmonization of Korean national standards with international ones.

3.1 Organizations and their Functions in Industrial Standardization

Industrial standardization in Korea is the responsibility of the government. Government activities are supplemented by activities in a number of private sector organizations. The Ministry of Commerce, Industry & Energy is responsible for carrying out the Industrial Standardization Act.

Specific organizations and their responsibilities are listed below:

- Ministry of Commerce, Industry and Energy (Industrial Standards Division)
 - National standardization policy
 - Industrial Standardization Act

- Korean Agency for Technology and Standards, the Ministry of Commerce, Industry and Energy
 - Management of KS standards development
 - Operation of KS marking system
 - Member body to international standardizing bodies such as ISO, IEC, and the Pacific Area Standards Congress (PASC)

- Korea Standards Association (private sector)
 - Dissemination of KS standards to industry
 - Training and education
 - Operation of KS Marking certification

⁶ KS Catalogue on Korean Industrial Standards (2001)

3.2 Korean Industrial Standards (KS)

3.2.1 Introduction

Korean Industrial Standards are the national standards that are established under the Industrial Standardization Act, and are abbreviated as KS. The KS system improves the quality and productivity of mining and industrial products, promotes fair trade and protects consumers' rights.

The KS consists of standards in 16 categories, and the number of standards in each category is shown in Table 3.1. The total number of the KS has increased since its establishment in September 1961, as described in Table 3.2.

Table 3.1 Present Status of KS standards

(as of June 2002)

Category	Number of Standards
A : Basic Standards & Miscellaneous	620
B : Mechanical Engineering	2,094
C : Electrical & Electronic Engineering	1,502
D : Metals	995
E : Mining	283
F : Civil Engineering & Architecture	662
G : Household Goods & Office Supplies	252
H : Food Products	224
K : Textiles	581
L : Ceramics	387
M : Chemical Engineering	2,371
P : Medical Equipment	400
R : Transportation Machinery	686
V : Shipbuilding	535
W : Aircraft & Aviation	256
X : Information Technology	821
Total : 16 categories	12,669

Table 3.2 Annual Numbers of KS

(as of December 2001)

Year	Cumulative Number	Year	Cumulative Number
1962	300		
1964	895	1985	7,475
1966	1,185	1987	7,833
1968	1,554	1989	8,400
1970	1,846	1991	8,686
1972	3,034	1993	8,975
1974	4,106	1995	9,366
1976	4,195	1997	9,851
1978	6,186	1998	10,193
1980	7,029	1999	10,596
1982	7,315	2000	10,845
1984	7,413	2001	12,006

3.2.2 Procedure for Establishing and Revising Korean Standards

KS standards can be established in the following two ways: . at the request of KATS, in order to improve the quality of industrial products, to protect consumers' rights, to conserve energy and resources, to secure health and safety, or to promote simplification; or . at the request of interested parties.

In the first case, KATS will request the KSA, or academic societies, or research institutions, to prepare a draft standard. In the second case, the applicant is solely responsible for preparing the drafts. Upon receiving the drafts, KATS may seek the opinions of relevant parties such as manufacturers, consumers, and related organizations. After this, the drafts, together with the relevant information, will be submitted to the Industrial Standards Committee for deliberation. A divisional council in the Industrial Standards Committee will then review the draft. If more detailed technical review is required, the draft will be passed to the corresponding technical committee for further study.

If the draft is approved, it will be announced as a new standard by the KATS. A new standard is valid for five years and is reviewed every five years. At that point, the standard may be revised, confirmed, or withdrawn. The procedure for the establishment of KS is shown in Figure 3.1.

Any person who is interested in having a KS revised may request this revision by submitting the proper documents to the KATS. The procedure for revising KS standards is the same as in the case of establishing a new KS.

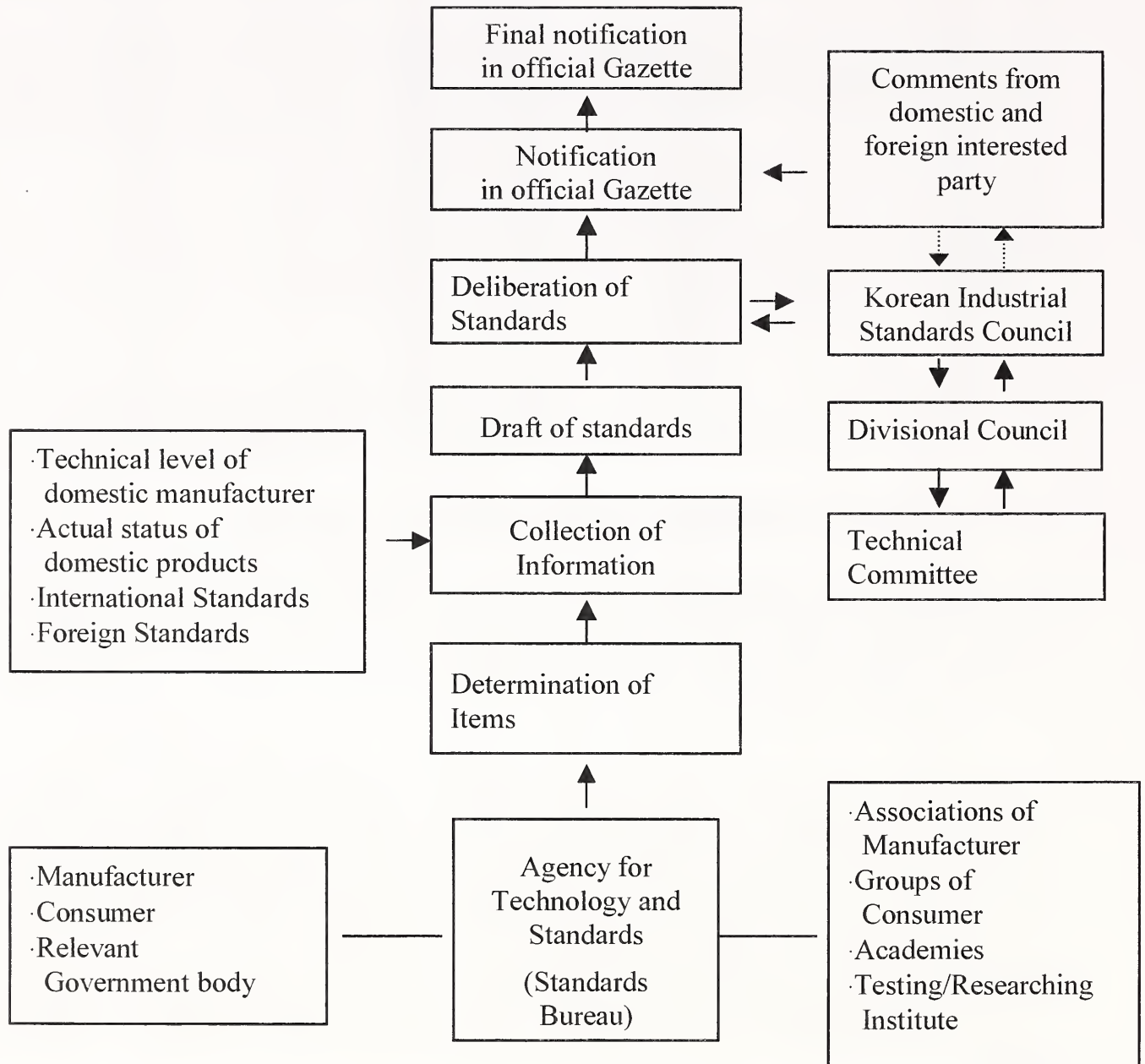


Figure 3.1 The Procedure for the Establishment of the KS

3.2.3 Industrial Standards Committee

The Industrial Standards Committee (ISC), established under the Industrial Standardization Act, serves as an advisory committee to the KATS on matters related to the establishment, revision, confirmation and withdrawal of Korean Industrial Standards. KATS serves as the secretariat to ISC. The ISC is composed of not more than 300 experts from various areas, including manufacturers, consumers, research institutions and academic institutions.

The Standards Council is composed of a chairman, a vice-chairman and members appointed by the chairman with KATS endorsement. The Standards Council is responsible for the operation, establishment and disbandment of Divisional Councils and coordination among the Divisional Councils.

Each Divisional Council is composed of 8 to 15 members, and deliberates on such matters as the establishment, revision, confirmation and withdrawal of Korean Industrial Standards and the designation of products subject to KS marking.

Each Technical Committee is composed of up to 20 members and investigates and deliberates on the drafts of industrial standards for technical matters, and on other matters relating to industrial standardization that are passed down from the Divisional Councils.

Table 3.3 Industrial Standards Committee

	Number of Committees	Total number of members
Divisional Councils	39	286
Technical Committees	510	4,796

3.2.4 Harmonization with International Standards

KATS aligns Korean Standards (KS) with international standards in accordance with ISO/IEC Guide 21. It is expected that the alignment project, in which unharmonized KS are identified and aligned with corresponding ISO or IEC standards, will be completed by the end of 2003. In coming years, KATS will increase the number of standards it maintains, so that it can better meet standards needs in the rapidly modernizing Korean economy.

3.3 KS Marking System

3.3.1 Introduction

The KS marking system is a certification scheme to certify the conformity of products or technologies to relevant KS standards. KS marks on goods, packages, or containers indicate that the marked products meet the specifications defined by the KS standards, and that their manufacturers have better or equal manufacturing capabilities than those which are defined in the KS standards and their corresponding factory inspection criteria.

The purpose of the KS marking system is to promote the use of the Korean Standards and facilitate their practical application, to promote standardization and quality management, and to protect consumers by enabling them to choose high quality products.

The Korean Agency for Technology and Standards (KATS) is responsible for establishing the KS standards and operating the KS Marking System. Until July 1998, the KS marking certification was handled by KATS and was known as the KS Marking Permit for domestic manufacturers and the KS Marking Approval for foreign manufacturers. Currently, all certification work is carried out by private sector and is known as the KS Marking Certification.

Table 3.4 Status of KS Certification

(as of June 2002)

Divisions	Number of KS items designated for marking	Status of KS Certifications		
		No. of products	No. of factories	No. of certifications
A	48	20	67	98
B	256	161	648	1,273
C	302	186	926	3,583
D	162	137	684	1,662
E	14	13	12	27
F	121	98	2,091	3,410
G	77	69	217	304
H	89	31	60	91
K	71	22	21	32
L	94	57	433	628
M	411	162	555	1,853
P	13	10	6	16
R	59	32	71	113
V	-	0	0	0
W	7	7	2	15
X	5	2	2	3
	1,729	1,007	5,796	13,108

3.3.2 Technical Requirements

In order to certify the conformity of the products or processing techniques to KS standards, there must be relevant KS standards. The items that can have KS marks are limited to the items that are designated and notified publicly by KATS. KATS designates the items to be marked when the item falls under any of the following cases;

- Mining and industrial products:
Items for which quality is difficult to identify and marking is thus required for the protection of consumers;
Items that correspond to raw materials and have an effect on other industries; and
Monopolistic and oligopolistic items or items for which prices may change quickly.
- Processing techniques:
Those processing techniques that have reached the technical level that is prescribed in the standards;
Those processing techniques which make it possible to improve quality.

When KATS designates items to be marked, the "Criteria for Certification" of the item is issued and notified publicly in the Korean Gazette at the same time. Each set of certification criteria consists of 9 parts. These are: general standardization; material management; control of the production process; the quality of the product; manufacturing facilities; inspection facilities; sampling methods applicable to testing; the method of applying the KS-mark; and classification of certification.

In order to get the KS marking certification on domestic and foreign products, the factory and its products must meet the requirements of the relevant KS standard and the applicable certification criteria.

3.3.3 Certification Body

KS Marking Certification Bodies are responsible for certifying the conformity of products or processing techniques to KS standards and carrying out surveillance through periodical inspections.

KS-Marking Certification Bodies are designated by KATS.

A certification body fulfilling all of the following can make an application to KATS for designation as a "KS-Marking certification body":

- 1) It is nonprofit and its main business should be industrial standardization;
- 2) The organization carries out certification activities exclusively;
- 3) The organization operates more than 10 regional offices throughout Korea;
- 4) More than 2 auditors have been secured for each field covered in the scope of its certification activities; and
- 5) Any business beyond certification activities that carried out, the business must have no effect on fair certification activities.

A certification body that wants to become a "KS-Marking Certification Body" shall include the following in its operational procedures for KS-marking certification activities:

- 1) The procedures and methods of assessment for the certification;
- 2) Composing and operating a KS-marking certification committee;
- 3) Certification surveillance procedures such as periodical inspection;
- 4) Reporting procedures for the certification assessment results;
- 5) The rules that employees and auditors must observe;
- 6) Management and supervision of the employees;
- 7) Expenses and fees for the initial inspection and periodical inspections;
- 8) Training of auditors;
- 9) Inspection of the certification body itself for fair certification; and
- 10) Other matters KATS may consider necessary.

After confirmation of the acceptance of the application, KATS assesses the certification body. If the result of assessment shows it conforms to the requirements of the criteria

concerned, KATS issues a "Certificate of Accreditation as KS-Marking Certification Body" with a clear statement of its scope of certification and publishes this information in the Official Gazette. KATS can inspect KS-marking certification bodies. Any certification body shall ensure, through the rules in its operational procedures, that all confidential information obtained in the course of its certification activities is not disclosed to a third party by its employees and those of its agent.

3.3.4 Product Certification Scheme

- Application for KS certification

Any person manufacturing an item designated to be marked may submit a form "Application for KS-Marking Certification" to a KS-marking certification body in accordance with the Enforcement Regulations of the Industrial Standardization Act. A single application covers products coming from one factory only. If there is a revision of the relevant KS standard or the criteria for certification concerned after acceptance of an application, the certification body which accepted the application may notify the applicant of the revised standard or the criteria and ask them to correct the application in accordance with the revisions to the standard or certification criteria.

- Inspection of quality management system

After confirmation of the acceptance of the application, the certification body shall inspect whether or not the application complies with the relevant KS standard and the certification criteria. The certification body notifies the applicant of the assessment schedule and the list of auditors. The inspection is performed by an assessment team composed of more than 2 auditors deemed competent for the functions they perform.

At least one of the auditors shall be from an appropriate body among the "Designated Audit Bodies" which have been designated by KATS based on their technical competency. At least one of the auditors shall have participated in at least 5 prior factory assessments. The assessment team shall not include an auditor who is from a body that has provided consulting services to the applicant's factory.

- Inspection of factory quality management system

Inspection of the applicant's system of factory quality management forms part of the initial inspection. This is done according to the appropriate certification criteria.

The assessment team will inspect the factory and its management records for the latest 3 months. While the assessment team inspects the factory, the auditor who is from the certification body mainly examines accordance with general standardization criteria (Part 1), and the auditor who is from the Designated Audit Body examines compliance with other parts of the criteria.

After inspecting the factory, the assessment team submits a report to the certification body in accordance with the form laid down in the Guidelines for Implementation of the Enforcement Regulation of the Industrial Standardization Act.

The certification body may exempt a part of factory inspection when the application falls under any of the following cases:

In case a licensee applies for certification to additional types or models of product made in the same factory to the same standard as the products for which a license is already held;

In case the applicant's factory failed in the initial testing and resubmits the application in one year;

In case the applicant's factory has obtained the certification of its quality assurance system in accordance with "Quality Management Promotion Law" and its relevant regulations.

The certification body that omits a part of factory inspection shall require the auditor who selects the samples for initial testing to confirm and report if the manufacturing facilities and inspection facilities in the factory comply with the criteria. If the facilities in the factory do not comply with the criteria, the certification body shall not issue a certificate.

- Initial Testing

- 1) Selection of samples

The selection of test samples shall be based on the rules prescribed in the Annex to Enforcement Regulations and the criteria concerned.

In principle, the test samples shall be selected by the auditor who is from the Designated Audit Body and be representative of the group of production to be certified. The auditor selects and seals the samples at the factory according to the "Sampling Methods" and "Classification of Certification" in the criteria concerned. The auditor also requests a testing laboratory designated by KATS (among the testing laboratories that have been accredited by the "Metrology Law" or "Industrial Standardization Act") to test the samples. When the auditor requests the testing laboratory to test the samples, the auditor may ask the applicant for help with transport of the samples.

- 2) Sample testing

When the test request is received, the accredited testing laboratory carries out the test according to the testing method in the relevant KS standards and sends the test report to the auditor who requested the test. The auditor who receives the test report shall submit it to the certification body without delay. When the samples fall under any of the following cases, the auditor may carry out the initial test at the site of the applicant's factory:

If the samples are very heavy or difficult to be transported;

If the factory is located abroad and there is no accredited testing laboratory on-site;

If there is no accredited testing laboratory which has the facilities to test the samples in the country

- Certification

When the assessment report and the test report are received, the certification body convenes the KS Marking certification committee and makes a decision based on the "Standard for Judgement based on the Criteria for Assessment for Certification" that has been laid out in the Guidelines.

If the results of the initial inspection and the initial testing conform to the requirements of the KS standards and the criteria concerned, the certification body shall issue a certificate to the applicant according to the form "Certificate of KS-Marking" in the Enforcement Regulations. When an applicant has obtained the certification to several types or models to the same standard, the certification body shall list all certifications received on the same certificate.

If an applicant has transferred his/her business to another person, has died, or the corporate body has been merged, then the transferee or the successor or the corporate body after the merge succeeds the licensee's position. The person who has succeeded the licensee's position shall report the change to the appropriate certification body.

- Extending a certification

A certified manufacturer wishing to extend his license to additional types or models of products, made in the same factory to the same standard as the products for which a license is already held, may apply to the certification body with the usual application form.

The certification body may decide not to carry out a part of factory inspection, but shall carry out confirmation of the facilities in the factory and test samples of the additional types of product to determine whether they comply with its KS standard. If the facilities conform to its criteria and the tests are successful, additional certificates will be granted.

- Surveillance

There are two schemes for surveillance: "Periodical Inspection", that consists of the assessment of a factory's quality system and testing samples selected in the factory; and "Inspection of Products on Sale", that consists of testing samples selected from open markets or from the factory under surveillance.

Periodical Inspection (Surveillance by assessment of a factory's quality system and testing samples selected in the factory)

A certified manufacturer receiving a certificate shall undergo a factory inspection and testing of its products as a periodical inspection by the certification body at five-year intervals.

A certified manufacturer wishing a periodical inspection shall submit an application to the certification body that issued the certificate, in accordance with the Enforcement Regulations.

The certification body that receives an application for a periodical inspection shall inspect if the factory and its management records have complied with the criteria for certification over the prior year and if the certified products comply with the appropriate KS standard. The certification body may ask the manufacturer to provide the minimum amount of samples needed for the periodical inspection free of charge. The testing procedures are the same as those of the initial testing.

When the result of the periodical inspection shows that the KS-marked products do not conform to its KS standard, the certification body shall report the fact to KATS.

Inspection of Products on Sales (Surveillance by testing samples on the open market or in the factory)

When it falls under any of the following cases, KATS may carry out a quality test of the KS-marked products selected on the open market or an inspection of products, raw materials and technical conditions of production at the licensee's factory:

If damage has occurred to many consumers due to quality deterioration of the KS-marked products, or is expected to occur; or

If quality deterioration of the KS-marked products being used for construction work is expected to be a serious hindrance to public safety.

Any person who has recognized that KS-marked products or processing techniques do not comply with corresponding KS standards may make a claim to the certification body concerned by submitting a written application stating the following:

Name and address of the applicant;

Appellation, classification or grade of the marked products;

Name of the factory manufacturing the marked products;

The place where the products have been sold, and the name and address of the seller; and,

Reason for application.

The certification body receiving the application shall examine the application and, if it recognizes that the marked product does not comply with its standard, shall ask the licensee concerned to change or repair the product. If the result of the examination shows that the marked products do not comply with the relevant standards and suggests that hazards to public safety may arise, the certification body shall make a recommendation to test the concerned products on sale in the market place, or to inspect products, raw materials, and technical production condition of the factory manufacturing the products of concern to KATS.

- Suspension of certification for a product

If the surveillance shows non-compliance with the requirements, the following penalties will be given by KATS to the relevant manufacturer in accordance with the "Criteria for Punishment classified by Item" in the Guidelines:

Improvement;

Suspension of KS-marking for one month or three months;

Removal of KS-mark from the product on sale; or

Suspension of the right to sell the marked product.

After penalizing a manufacturer, KATS will notify the result of inspection and the resulting penalty to the certification body concerned.

- Withdrawal/cancellation of a certification

Before withdrawing a license, the certification body will give the manufacturer an opportunity to submit his opinion. A certification body may withdraw a license when the manufacturer falls under any of the following cases:

If the manufacturer has obtained the certificate by fraudulent and dishonest means. In this case, the certification body shall withdraw the certificate;

If the manufacturer has not undergone the Periodical Inspection;

If the surveillance shows that the non-compliance is of a serious nature; or

If the manufacturer has not complied with the order of removal of KS-marks from the products without due reasons.

If a certification body has withdrawn a certificate, KATS may order the manufacturer to remove the KS-mark from the products on sale.

The manufacturer shall return the certificate to the certification body concerned in the following cases:

When the standard concerned has been withdrawn;

When the certification criteria concerned have been withdrawn; or

When the manufacturer licensee gives up his business.

- Implementation of modification of a standard

When the relevant KS standard or the corresponding inspection criteria are revised, the manufacturer is regarded as having obtained the certificate in accordance with the new standard or criteria.

In this case, when additional procedures are considered necessary to maintain the certification, the certification body may notify the licensee of the revised standard or criteria for their procedures.

3.3.5 Use of a Mark of Conformity

Mark of conformity

No person other than those who have obtained the certificate shall affix the KS-marks or any marks similar to them, to products, packages or containers. No person shall intentionally sell, display, store, transport, or import for sale products known to bear illegally affixed KS-marks or other similar marks.

Marking

The KS-marks on the products shall be affixed in accordance with "Method of Marking the KS Mark" in the criteria concerned.

The KS-marking contains the following information:

The title and number of its standard;

Class or grade;

The certification number;

The date of manufacture;

The name of manufacturer or the code indicating the manufacturer;

The name of the certification body;

The KS-mark

Publicity by certified manufacturer

A certified manufacturer has the right to advertise that he/she has been authorized to apply the KS-mark for products to which the certificate applies. Advertisement of the marked products shall be made only after they are produced.

When advertising marked products, the certification number of its marking, the name and number of its standards, its classification or grade and its name shall be specified. When the certified products are publicized along with non-certified products, the certified manufacturer shall ensure that no confusion arises between certified and non-certified products. A product manufactured using certified components shall not be publicized as if it were a certified product.

A certified manufacturer may put up a bulletin board at the factory indicating that the products manufactured in the factory conform to their KS standards. The bulletin board shall be in accordance with the form prescribed in the Enforcement Regulations.

3.3.6 Misuse of a Mark of Conformity

Any person who falls under any of the following cases shall be punished by imprisonment for less than two years or a fine not exceeding 10 million won:

Any person who has illegally applied a KS-mark to products or processing technique;

Any person who has sold counterfeit KS-marked products;

Any person who has displayed, stored, or transported for sale counterfeit KS-marked products while knowing their illegality;

Any importer who has imported or sold the products or the processing techniques upon which KS-marks have been affixed without a license or any similar marks, or any importer who has disobeyed the order of KATS to stop selling them; and
Any person who has disobeyed the order of KATS to remove the KS-marks from the products confirmed as a non-conforming product with the relevant standard.

3.3.7 Support to KS Marked Products

Preferred purchase for KS marked products

When central government bodies, local government bodies, quasi-government organizations, or public associations procure, they should give preference to purchasing KS-marked products.

Exemption from inspection, verification or type approval

KS marked products may be exempted from inspection, verification or type approval required by related laws, which are indicated in Article 34 of the Industrial Standardization Act. Laws and the goods required to be inspected under these Laws are included below.

1. Safety inspection under the provisions of Article 17 of the Quality Management Promotion Act.
 - Goods to be inspected : 49 items including safety glass
2. Specification inspection under paragraph 1 of Article 33 of the Small and Medium Sized Enterprises Associations Act
3. Type approval according to the provisions of Article 9 of the Electrical Appliances Safety Control Act
 - Goods to have approval : 233 including electric irons
4. Verification of protection apparatus under the provisions of Article 35 of the Industrial Safety and Health Act.
5. Type verification under the provisions of Article 29 of the Electric Wave Act
6. Type approval under the provisions of Article 33 of the Electric Communication Act
7. Inspection of vessels according to the provisions of Article 17 of the High-Pressure Gas Safety Control Act
8. Verification of fire-fighting equipment under the provisions of Article 50 of the Act on Protection from Fire
9. Type approval of measuring instruments for the environment under the provisions of paragraph 2 of Article 8 of the Environmental Technology Development and Support Act
10. Type approval of construction machinery under the provisions of Article 18 of the Construction Machinery Control Act
11. Type approval and verification under the provisions of paragraph 3 of Article 6 of the Ships Safety Act

12. Type approval of equipment or materials for preventing sea pollution under the provisions of Article 64 of the Sea Pollution Prevention Act.
13. Type approval under Article 6 of the Law on Manufacturing and Control of elevators.

3.4 Participation in Global and Regional Standardization

As a major player in global trade, Korea recognizes the importance of international standardization in facilitating its international trade, as well as in transfer of technology through its participation in international standardization activities. In 1963, when Korea was still in its early years of industrialization, Korea became a full member of both the ISO and the IEC. It had already become a member of the International Telecommunication Union (ITU) in 1952. In the case of measurement standards, Korea was a member of the International Bureau of Weights and Measures (BIPM) even in the 19th century, but re-entered the organization in 1959; and in the area of legal metrology, Korea became a member of the OIML in 1978. Korea is also a member of ILAC and the IAF. Table 3.5 summarizes Korea's participation in international organizations.

Table 3.5 Korea's Participation in International Organizations

Organizations	Entrance Year	Member Body
ISO	1963	KATS
IEC	1963	KATS
ITU	1952	Korean government, through the Ministry of Information and Communication
BIPM	1959	Korean government, through the Korean Research Institute of Standards and Sciences
OIML	1978	Korean government, through KATS
ILAC	1996	KOLAS at KATS
IAF	1996	KAB (for QMS and EMS) KAS at KATS (for product certification)

Regarding regional cooperation, Korea was one of the first countries to participate in the Pacific Area Standards Congress (PASC) and actively participates in the Asia-Pacific Economic Cooperation (APEC)/Sub-Committee on Standards and Conformance (SCSC). It also participates in various regional organizations for standards-related activities in the Pacific region.

Regarding policy-level participation in the ISO and IEC, KATS recently became a member of the ISO Council at the 24th assembly meeting of ISO in 2001. KATS is also a member of IEC's Council Board (CB), the Standardization Management Board (SMB), and the Advisory Committee on Environment Aspects (ACEA).

Since the late 1990s, Korea's participation in ISO and IEC's Technical Committees (TCs) and Sub-Committees (SCs) has increased dramatically. Changes in Korea's participation in these committees is shown in Figure 3.2.

No. of Committees

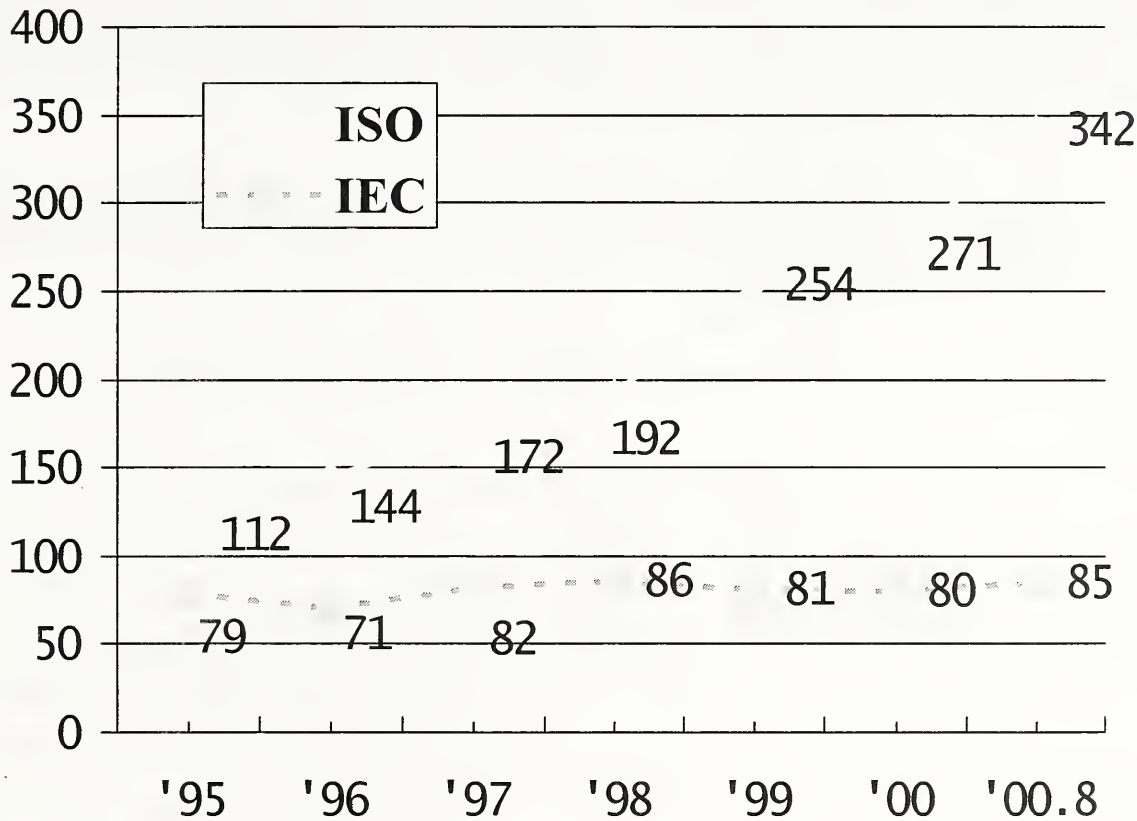


Figure 3.2 Korean Participation in ISO/IEC's TCs and SCs Combined

Regarding participation in multilateral mutual recognition agreements, the Korea Laboratory Accreditation Scheme (KOLAS) became one of the signatories to the Mutual Recognition Arrangement (MRA) in the Asia Pacific Laboratory Accreditation Cooperation (APLAC) and ILAC in 1999. The Korea Accreditation Board (KAB: www.kab.or.kr) joined the IAF Mutual Recognition Arrangement (MLA) in September, 1999.

3.5 Bilateral Cooperation with Foreign Institutes

As a member of the global economy, Korea tries to join other countries in their efforts to eliminate unnecessary trade barriers resulting from standards and conformity assessment. In this respect, KATS recognizes the importance of bilateral and multilateral cooperation

and actively pursues formal cooperative relationships in the fields of standardization, legal metrology, and conformity assessments with other countries, with a view to deepening mutual understanding and reducing technical barriers to trade.

In 1979, Korea and Japan launched a cooperative effort that included standardization, legal metrology, and cooperation projects (including visits, exchanges of experts, and annual meetings) through their national standardization bodies. Based on this effort, Korea and Japan agreed to hold annual meetings to discuss standards-related issues between the two countries. In 2001, the 21st Standards Meeting between KATS and the Japanese Industrial Standards Committee (JISC) was held in Tokyo.

KATS has also established a formal relationship with a number of countries, including the United States (NIST and ANSI), Germany (DIN), and France (AFNOR). KATS has begun substantial cooperation with NIST in the United States through placement of a temporary liaison officer at NIST.

The status of Korea's cooperation with 14 foreign countries and 15 institutes is shown in Table 3.6.

Table 3.6 Status of Cooperation with Foreign Countries

Nation	Institute	Year	Topics
Japan	JISC (then AIST)	1979	Annual meetings
Russia	GOST-R	1992	Agreement on Scientific and Technical Cooperation in the fields of Standardization, Metrology, and Certification
Turkey	TSE	1993	Arrangement on Scientific and Technical Cooperation in the field of Standardization
China	CSBTS	1994	Arrangement for Scientific and Technical Cooperation in Standardization, Metrology, and Quality Certification
Australia	SAI (then SA)	1995	Agreement for Technical Cooperation in the field of Standardization
Saudi Arabia	SASO	1995	Program of Technical Cooperation
United Kingdom	BSI	1995	Agreement for Technical Cooperation in the field of Standardization
Israel	SII	1997	Arrangement on Technical Cooperation
Ukraine	DSTU	1997	Arrangement in Technical Cooperation in the fields of Standardization, Metrology and

			Certification
Poland	PCBC	1998	Memorandum of Understanding
France	AFNOR	2000	Memorandum of Understanding
U.S.A.	NIST	2000	Memorandum of Understanding for Cooperation relating to Standardization, Conformity Assessment and Legal Metrology
	ANSI	2000	Agreement on Cooperation
Germany	DIN	2000	Memorandum of Understanding for Cooperation relating to Standardization, Conformity Assessment
Singapore	SPRING (then PSB)	2000	Arrangement for Cooperation in Standardization and Conformity Assessment

4. Conformity Assessment System Managed by KATS

This section provides general information on the Korean conformity assessment system, followed by information on voluntary and mandatory marking regimes.

The Korean Agency for Technology and Standards (KATS) operates accreditation schemes for product certification bodies, calibration and testing laboratories, and inspection bodies in accordance with ISO/IEC Guides and Standards. Specifically, KATS operates the Korea Accreditation System (KAS) as an accreditor in the product certification area and the Korea Laboratory Accreditation Scheme (KOLAS) as an accreditor of calibration and testing laboratories and inspection bodies. The structure of the conformity assessment system, shown in Figure 4.1, is based on ISO/IEC guides and standards. The entities listed in parentheses indicate the corresponding functions of the American National Standards Institute (ANSI) and NIST in the United States.

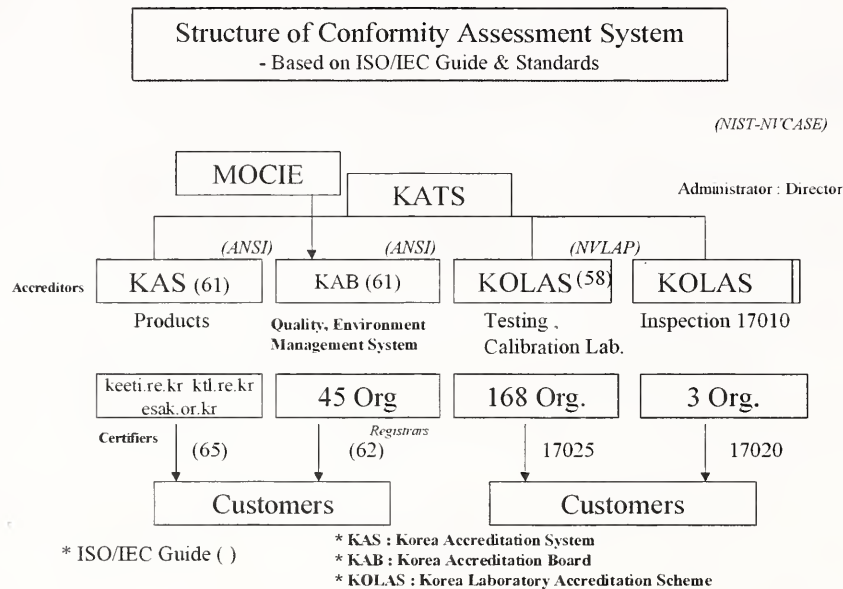


Figure 4.1 Structure of the Conformity Assessment System in Korea

KAS, established in 2001 under Article 21 of the National Standards Act, plays an important role in consolidating the product certification system that is dispersed in 15 ministries and administrations. The KAS joined the International Accreditation Forum (IAF) and Pacific Accreditation Cooperation (PAC) to promote international and regional activities. KAS has also accredited three laboratories in the field of electrical products as shown in Figure 4.1.

4.1 Laboratory Accreditation

In Korea, the Korea Laboratory Accreditation Scheme (KOLAS) accredits testing, calibration, and inspection laboratories, and also accredits provider of standard reference materials. KOLAS, established in 1992, operates in conformance with ISO/IEC Standards and Guides including ISO/IEC 17025, 17020, 17010 and Guide 58, as shown in Figure 4.1. KOLAS is administered by KATS.

4.1.1 Mission and Structure of KOLAS

The mission of KOLAS is to provide high quality accreditation services and to be recognized domestically and internationally as a competent accreditor. KOLAS also participates in international activities. In 1995, KOLAS became a signatory to the APLAC MRA and through the APLAC MRA, to the ILAC MRA.

The Administrator of KATS is responsible for the overall operation of KOLAS and serves as the Head of KOLAS. The Director General of the Conformity Assessment Bureau of KATS serves as the Executive Director of KOLAS and oversees 26 committees in several fields including assessor qualification, steering, and technical areas. More than one thousand experts are registered as assessors and technical experts. The Metrology Division and Laboratory Division evaluate applications for KOLAS accreditation as shown in Figure 4.2. The abbreviation P.T and R.M denote proficiency testing and reference materials, respectively.

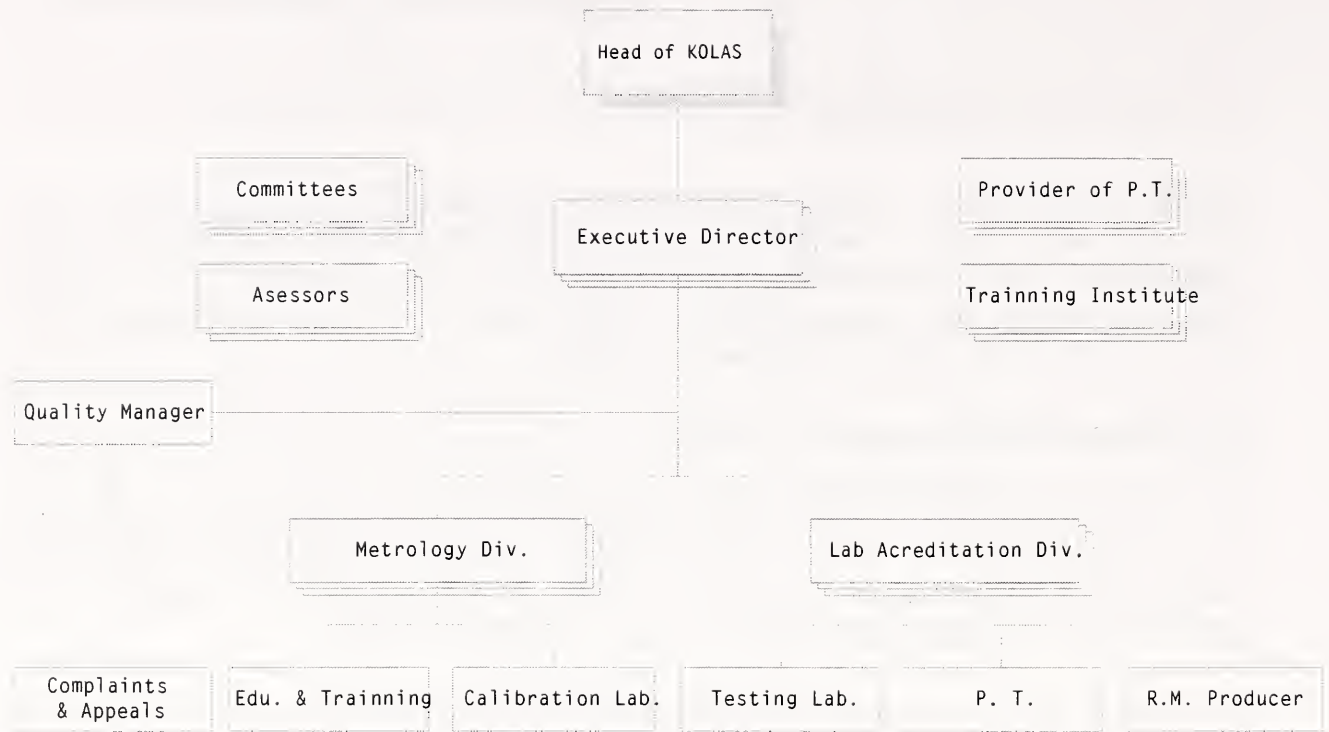


Figure 4.2 Structure of KOLAS

4.1.2 KOLAS Accreditation Fields

The accreditation fields of KOLAS are classified under four categories: testing, calibration, inspection, and standard reference materials. Information on fields within each of those categories is provided below.

Testing Laboratories: 11 fields

- Mechanical Testing
- Chemical Testing
- Electrical Testing
- Heat and Temperature Measurement
- Non-destructive Testing
- Acoustic and Vibration Testing
- Optics and Photometry Testing
- Medical Testing
- Good Laboratory Practice for Chemicals based on OECD Guidelines
- Biological Testing
- Fastener or Fastener Metals by FQA

Calibration Laboratories: 9 fields

- Length
- Mass
- Time and Frequency
- Electricity and Magnetism

Electromagnetic Wave
Temperature and Humidity
Acoustics and Noise
Optics
Radiation

Inspection: ISO 17020 Type A (Third Party Services)

Standard Reference Materials: 3 fields

Chemical Composition
Physical Characteristics
Engineering Characteristics

4.1.3 Procedures and General Requirements of KOLAS

Requirements for the accreditation body, as laid out in ISO/IEC Guide 58, set forth the basic procedures under which KOLAS operates. Guides lay out the general accreditation requirements for testing, calibration, and inspection laboratories and standard reference materials. The use of these criteria promotes cooperation and confidence among laboratories, and promotes the exchange of information and harmonization of international standards and advanced procedures. In particular, all accredited laboratories must use SI units. Following are five regulations published and translated in English:

- Operational Regulations for Accreditation of Calibration Laboratories (KOLAS-R-001: 2000)
- Operational Regulations for Accreditation of Testing Laboratories and Inspection Bodies (KOLAS-R-002: 2000)
- Operational Criteria for Proficiency Testing Schemes (KOLAS-R-003: 2000)
- Guideline for Traceability of Measurement Results (KOLAS-R-004: 2000)
- Guideline for Evaluating and Expressing the Uncertainty of Measurement Results (KOLAS-R-005:2000)

4.1.4 Status of Accredited Laboratories

The current status of testing and calibration laboratories accredited by KOLAS are shown in Figures 4.3 and 4.4, respectively.

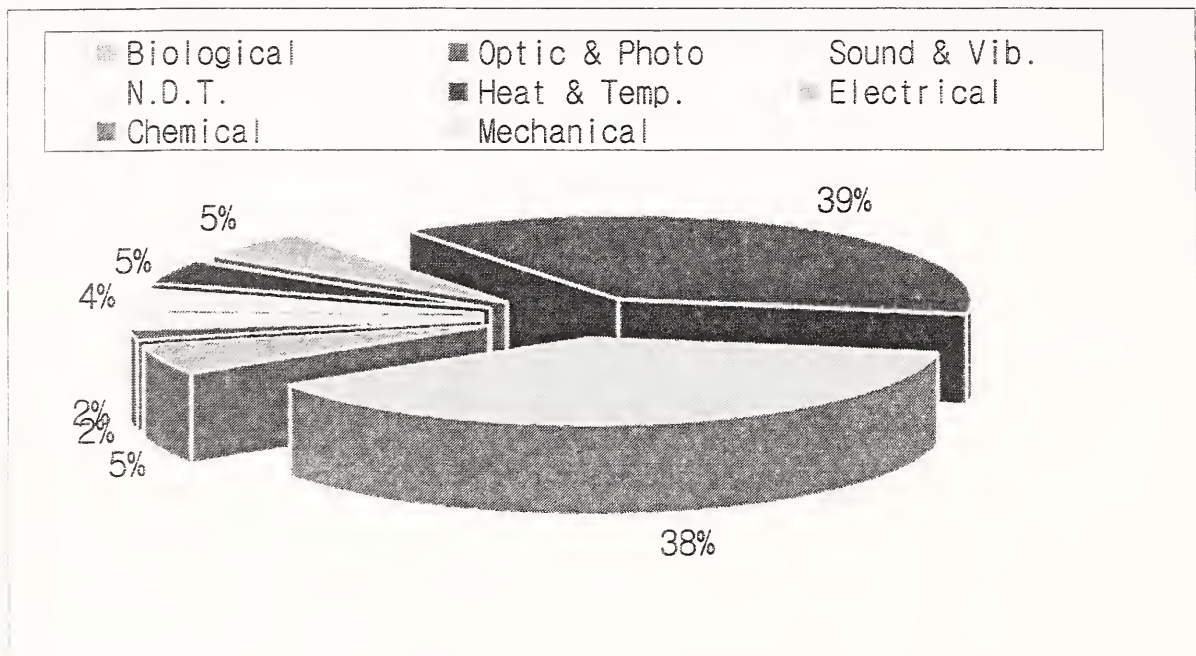


Figure 4.3 Fields of Accredited Testing Laboratories

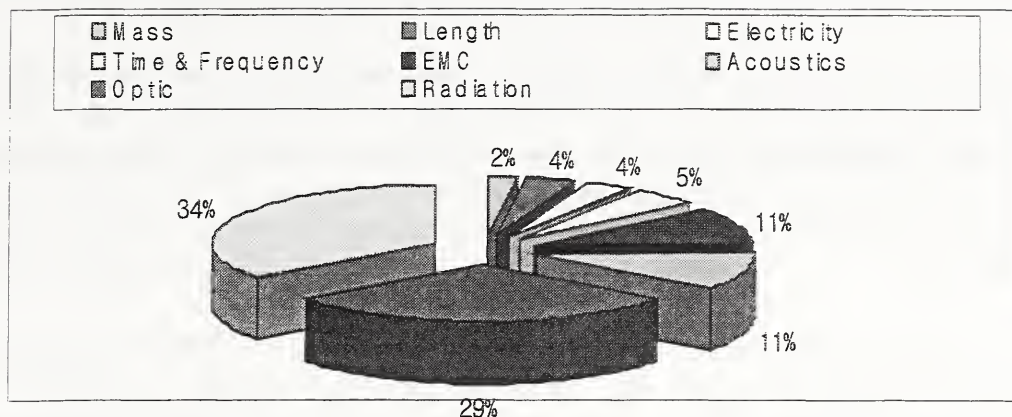


Figure 4.4 Fields of Accredited Calibration Laboratories

4.2 Korea Accreditation Board

MOCIE designated the Korea Accreditation Board (KAB, <http://www.kab.or.kr>) as the sole national accreditation body for the ISO 9000 series certification scheme under the Quality Management Promotion Act. KAB is also designated as the sole accreditation body for the ISO 14000 series certification scheme under the Environmental Friendly Industrial Structure Promotion Act, with endorsement from MOCIE and the Ministry of Environment.

Originally, the ISO 9000 related certification scheme was introduced and managed by the Industrial Advancement Administration, which was KATS' predecessor. However, in 1995, IAA transferred the function to the private sector. KAB was established in the same year as a non-profit private organization.

KAB's objectives are to ensure impartiality of its services based on internationally harmonized criteria and enhance credibility and confidence of its accreditation programs. Ultimately, it hopes to enter into mutual and multilateral recognition agreements with appropriate international bodies, regional bodies, and national bodies and to promote the international acceptance of certificates issued by KAB's accredited bodies. KAB became a signatory to the IAF MLA in 1999.

- Structure and Status of KAB

KAB is composed of a General Assembly, a Council (Board of Directors) and a Secretariat. Under the Council, there is an Accreditation Management Board (AMB), an Accreditation Review Panel (ARP) and an Auditor Qualification Committee.

The Accreditation Management Board is responsible for the establishment of policies and strategies relating to accreditation. To ensure a balance of interests, the Board consists of seven interested parties, including representatives from KAB, government agencies, academia, suppliers, users, consulting bodies and certification bodies.

The decisions on accreditation are under the responsibility of the Accreditation Review Panel. For impartial and reliable deliberation of assessment results, the Panel is composed of experts from various fields, including government, academy, suppliers, and certification bodies. The Auditor Qualification Committee is responsible for granting certification to auditor applicants and defining scopes in which certified auditors carry out the audits.

The KAB provides criteria, scope, process, and activities for ISO 9000 and ISO 14000 certification programs on its web site (<http://www.kab.or.kr>) in English. There are currently 31 and 16 accredited certifiers for ISO 9000 and ISO 14000, respectively.

4.3 Voluntary Certification Scheme other than KS operated by KATS

KATS operates several marking schemes, described below, to encourage technology development, the improvement of quality and reliability, and to promote the use of recycled products.

4.3.1 NT (New Technology)

The NT mark is frequently issued to outstanding technology or products recently developed in Korea. The quality of products developed within the preceding three years is investigated in comparison with similar technologies and products of foreign countries for the issuance of certification.

4.3.2 EM (Excellent Machinery, Mechanism and Materials)

The EM mark is frequently issued to outstanding machines, mechanisms, and materials to encourage quality improvement for developing products in Korea. Machinery parts, components, and materials developed within the preceding three years are eligible for the certification.

4.3.3 GR (Good Recycled)

The GR mark is frequently issued to outstanding recycled products to certify their quality and encourage their use.

4.3.4 Assessment and Certification on Reliability

KATS issues a certification mark based on the results of reliability tests for components and materials.

4.3.5 Quality Certification for Environmental Equipment

KATS issues certificates for the quality of environmental equipment developed by domestic companies.

4.4 Mandatory Certification Scheme operated by KATS

KATS manages safety regulations and an inspection system for the sake of consumer protection.

4.4.1 Safety of Electrical Appliances

Introduction

The Electrical Appliances Safety Control Act, enacted in 1974, was revised twice to meet customer needs. Major aims of the Act are:

- 1) To conduct safety inspections for electrical appliances that present potential dangers or hazards;
- 2) To provide safety and technical regulations for the total 229 items of electric and other manufacturing goods, including refrigerators and TV sets;
- 3) To establish and provide standards on measurement, and interference and tolerance level of electromagnetic waves; and
- 4) To establish and provide standards and methods of inspection for insulating materials of electrical application.

Regulated Products

KATS specifies regulated products, as shown in Table 4.2, and has designated three private organizations as certification bodies for these products. (<http://www.keeti.re.kr>, <http://www.ktl.re.kr>, <http://www.esak.or.kr>) For more information, please refer to the above URL addresses.

Table 4.1 List of Regulated Products

Product Classification	No. of Products		Examples	Note
	Domes tic	Interna tional		
1. Cables and Cords	15	10	Insulated Cables, Cable Cords, etc.	O mandatory - Electrical appliances
2. Switches for Electrical Household Appliances	9	10	Pull Switch, Cord Switch, etc.	

3. Electrical Household Appliances for AC or Capacitors for Power Supply	3	3	X Y Capacitors, Capacitor for Fluorescent Lamps, etc.	between 50V and 1,000VAC
4. Installation Accessories and Connection Devices	10	14	Plugs for Apparatus, Socket-Outlets, etc.	
5. Protective Accessories for Electrical Appliance	7	6	Fuses, Circuit Breakers, etc.	
6. Insulating Transformers	3	3	Automatic Voltage Regulator, Transformer for Householder, etc.	
7. Electrical Apparatus	72	104	Electric Stove, Electric Fans, Refrigerators, etc.	
8. Electrical-Driven Tools	8	17	Electrical Grinder, Sanders, etc.	
9. Audio & Video Equipment	8	25	TV, Amplifier, Video Game Stations, etc.	
10. Information-Office Equipment	6	9	Monitors, Printers, etc.	
11. Lighting	31	15	Glow-starters for Fluorescent Lamps, Fluorescent Lamps, etc.	
Total	172	216	As of July 1, 2002(229 items)	

4.4.2 Safety of Consumer Products

The consumer products safety scheme is based on the Quality Management and Industrial Products Safety Control Act. The scheme focuses on consumer products such as baby carrier, disposable lighters, and toys. KATS notifies regulated items and establishes their technical regulations. KATS has designated seven laboratories for testing: the FITI Testing & Research Institute (<http://www.fiti.re.kr>), the Korea Testing and Research Institute for Chemistry Industry (<http://www.kotric.or.kr>), the Korea Merchandise Testing & Research Institute (<http://www.komtri.re.kr>), the Korea Machinery Meter and Petrochemical Testing and Research Institute (<http://www.mpi.or.kr>), the Korea Apparel

Testing and Research (<http://www.katri.re.kr/>), the Korea Toy Industry Cooperative (<http://www.kotoy.or.kr/>) and the Korea Lighter Industry Cooperative (<http://www.lighter.or.kr/>). Major objectives of this system are:

To conduct safety inspections for items that present potential health problems or safety hazards; and

To establish and provide safety standards for certain consumer products, such as baby carrier and toys.

4.5 Legal Metrology

The Legal Metrology Act, which was substantially revised in 2000, covers general provisions, verification, periodical inspection, and related legal measures. KATS is responsible for the following:

Managing verification systems and type approval for legal measuring instruments;

Disseminating and operating the International System of Units, which include SI Units;

Reinforcing international cooperation with OIML and ILAC;

Harmonizing national type approval and verification standards with international standards for legal measuring instruments; and

Establishing mutual recognition agreements with other countries on legal measuring instruments.

4.6 Mandatory Certification Schemes by other Ministries in Korea

As in other countries, Korea's government ministries have individual certification schemes, as allowed in the WTO/TBT Agreement. Exact information on their nature may be obtained from relevant authorities, but a general overview of the whole system is compiled by MOCIE in the form of a consolidated public notice, the current version of which is given in Appendix 2.

5. Trade Facilitation through International Standards and Conformity Assessment

This chapter focuses on international and domestic activities that facilitate trade for Korea. Topics to be discussed here include the World Trade Organization (WTO) Agreement on Technical Barriers to Trade (TBT) and trade information services to customers.

5.1 WTO / TBT related Activities

Korea established four inquiry points under the Agreement on Technical Barriers to Trade. The Korean Agency for Standards and Technology (KATS) serves as the inquiry point for industrial products. Other inquiry points are:

The Ministry of Agriculture and Forestry (<http://www.maf.go.kr>) : Agricultural Products.

The Ministry of Marine Affairs and Fisheries (<http://www.momaf.go.kr>) : Fisheries

The Korea Food and Drug Administration (<http://www.kfda.go.kr>) : Food and Drugs

Between 1995 and 1999, Korea made 52 notifications under the WTO Agreement on Technical Barriers to Trade. The comment period requirement under the Agreement is observed. Information on newly established or revised technical regulations and conformity assessment procedures is also published in the Korean Government's Official Gazette.

Regarding the comment period for national standards (KS), a minimum of 60 days are allowed for comment under the Industrial Standardization Act. Additionally, the national standardization body, KATS, declared that it would accept the WTO TBT Code of Good Practice for the Preparation, Adoption and Application of Standards in December 1998.

At the domestic level, KATS collects, analyzes, and disseminates information within Korea on technical regulations and industrial standards of other countries to eliminate unnecessary technical barriers to trade (<http://www.ats.go.kr>). This information is available on the KATS internet homepage in the form of a searchable database, and is also published in the monthly journal of the Korean Standard Association (<http://www.ksa.or.kr>). The Status of WTO/TBT activities by KATS is shown in Table 5.1

Table 5.1 WTO/TBT Activities in KATS

(August 2001)

	Years					
	1996	1997	1998	1999	2000	2001
Total notifications to the WTO	460	796	648	731	613	225
KATS notifications	5	11	8	19	27	19
KATS responses	104	76	37	74	113	77

5.2 Trade Information Service

Various trade organizations carry out international trade activities for Korea. Big companies often manage their own branches in the global market. Small and medium companies make use of trade organizations for getting trade information from such organizations as the Korea International Trade Association (<http://www.kita.or.kr>) and the Korea Trade information Service (<http://www.kotis.net>). These organizations provide customers with information on export and import procedures and standards and conformity assessment procedures.

Information on major trade organizations is provided below.

The Korea Trade Investment Promotion Agency (KORTA: <http://www.kotra.or.kr>)

On request, KORTA introduces importers to the most appropriate business partners in Korea through a wide ranging inquiry network as well as business meetings. KORTA also operates a Buyer Service Center, where buyers visiting Korea can receive assistance

in arranging business meetings with Korean member companies of the GTNet (Global Trade Point Network).

The Korea International Trade Association (KITA: <http://www.kita.or.kr>)

KITA organizes various functions and events to enhance mutual understanding on trade issues, thereby helping to resolve private-sector trade disputes through dialogue. It also works with its overseas counterparts and international economic organizations to provide member firms with opportunities to interact fully with the international community. In addition, KITA provides exporters and importers with trade information through the Korea Trade Information Service (KOTIS: <http://www.kotis.net>).

The Korea Export Insurance Corporation (KEIC: <http://www.keic.or.kr>)

The Corporation compensates those losses incurred in export transactions and overseas investments that cannot be handled by the general insurance systems, and provides precise, diverse information to its customers.

Korean Commercial Arbitration Board (KCAB: <http://www.kcab.or.kr>)

The Korean Commercial Arbitration Board was established in 1970 by the Ministry of Industry and Commerce (currently the Ministry of Commerce, Industry and Energy) as a non-profit organization and is the only official arbitration institution in the Republic of Korea. It arbitrates with fairness and independence in accordance with the Arbitration Act (promulgated by Act No. 1767 as of March 16, 1966 and amended by Act No. 6083 as of Dec. 31, 1999). The Arbitration Rules were amended on April 15, 2000.

6. Summary

This report provides a brief introduction on the current standardization and conformity assessment in the Republic of Korea and the role of the Korean Agency for Technology and Standards in its operation and management of the Korean national standards system. It is the hope that this report will contribute to the understanding of the Korean standardization system by potential users in the United States, thereby facilitating trade between two countries.

At the present time, comparison of the national standard systems of the Republic of Korea and the United States is in progress. A report will be published when that comparison has been completed.

Index of Acronyms

BIS	Bureau of Industry and Security
EDA	Economic Development Administration
ERPO	Energy and Resources Policy Office
ESA	Economics and Statistics Administration
ITA	International Trade Administration
KIPO	Korean Intellectual Property Office
KTC	Korea Trade Commission
MBDA	Minority Business Development Agency
NOAA	National Oceanic and Atmospheric Administration
NSO	National Statistical Office
NTIA	National Telecommunications and Information Administration
PMO	Planning and Management Office
PTO	Patent and Trademark Office
SMBA	Small and Medium Business Administration
TA	Technology Administration
TIPO	Trade and Investment Policy Office

Appendix 1

National Standards Act

Chapter I. General Provisions

Article 1 (Objects) The objects of this Act are to provide fundamental requirements for the national standards system of the Republic of Korea; to facilitate scientific and technological innovation, to realize advanced industrial structure and information society; and to contribute to promoting the national competitiveness and welfare.

Article 2 (Application) This Act shall apply to all of the social and economic activities that are required to apply the national standards based on science and technology.

Article 3 (Definitions) For the purpose of this Act,

1. "national standard" comprises the measurement standards, reference standards, documentary standards, etc, as defined in this Act, which are recognized by a national decision, to serve as the uniform and public reference based on scientific and technological knowledge and to help promote the accuracy, reasonability, and the globalization of all the social activities.

2. "international standard" means every sort of standard, recognized by an international agreement, intended to facilitate international exchange of materials and services and to promote international cooperation in the fields of intellectual, scientific, technological and economic activities.

3. "measurement standard" means a material measure, measuring instrument, reference material, or measuring system intended to define, realize, conserve or reproduce a unit or one or more values of a quantity to serve as a reference.

4. "national measurement standard" means a standard recognized by a national decision to serve as the basis for assigning values to other standards of the quantity concerned.

5. "international standard" means a standard recognized by an international agreement as the basis for assigning values to other standards of the quantity concerned.

6. "standard on weights and measures" means a working standard, material measure, measuring tool, measuring method or system used for commercial transaction or its certification, intended to define, realize, conserve and reproduce a unit or value of a quantity to serve as a reference.

7. "reference standard" means the data and information on measurements made available to all the sectors on a continuous and reiterative manner, the accuracy and reliability of which have been recognized through scientific analysis and evaluation; it includes physical constants, recognized property value and scientific and technological data, etc.

8. "documentary standards" means standard document about scientific and technological criteria, directives, and technical protocols, which are applicable both on compulsory and voluntary manner, intended to enhance overall understanding, efficiency, and economic advantage in all sectors.

9. "industrial standard" means, as prescribed by the Industrial Standardization Act, the criteria for the industrial standardization - the unification and simplification of the kinds, shapes, quality, working method for manufacturing the mining and industrial products; of test and inspection method; and of the technical terms related to products and services.

10. "measurement" means a set of operations having the object of determining a value of quantity.

11. "unit (of measurement)" means a particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

12. "International system of units (SI)" means the coherent system of units adopted and recommended by the General Conference on Weights and Measures (CGPM).

13. "weights and measures" means a set of operations to determine the value of a certain quantity subject to commercial transaction requiring proof of trade in the market place.

14. "legal metrology" means a set of measurements required to provide certifications of the values and quantities measured in commercial transaction; the use and maintenance of measuring instruments are regulated by law so as to secure accuracy and justice in the commercial activities.

15. "unit of legal metrology" means a unit of measurement subject to commercial transaction and certification, the use and maintenance of measuring instruments are regulated by law so as to secure accuracy and justice in the commercial activities.

16. "reference material (RM)" means a material or substance one of more of whose property values are sufficiently homogeneous and well established to be used for the calibration of an apparatus, the assessment of a measurement method, or for assigning values to materials.

17. "calibration" means a set of operations that establish, under specified condition, the relationship between values of quantities indicated by a measuring instrument or measuring system, or values represented by a material measure or a reference material, and the corresponding values realized by standards.

18. "traceability" means a property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties.

19. "accreditation of test and inspection laboratories" means a set of administrative actions to accredit test and inspection laboratories based on evaluation of their technical qualifications and competence to carry out specific test and inspection; the evaluation of its competence of the laboratories should be performed by an accreditation organization with official authority.

20. "conformity assessment" means the overall umbrella of measures taken by manufactures taken by manufacturers, their customers, regulatory authorities, and independent, third parties to assess that a product, service, procedure, system, product standard, technical regulations meets the requirements set out in a given standard or technical regulations as internationally recognized.

Chapter II. Establishment of National Standards System

Article 4 (Policy and Measures) The Government shall work out policy on the establishment of national standards system and accordingly take measures in legal, financial, and administrative affairs as required.

Article 5 (National Standards Council)

The National Standards Council (hereinafter referred to as the "Council") shall be established, under the direct control of the Prime Minister, committed to review matters relating to the basic plan of national standards system as stated in the Article of this Act and to coordination of responsibilities among the Ministries concerned.

The functions of the Council are to review and coordinate:

1. basic plan of the national standards system and comprehensive coordination of the nation's policy on the national standards;
2. cooperative activities with international and foreign standards organizations;
3. R&D activities and dissemination of technology related to standards;
4. programs for the establishment of conformity assessment system;
5. system and regulations relevant to measurement standards, reference standards, and documentary standards;
6. unification of the national standards with compatibility to international standards; and
7. other matters related to the national standards system as prescribed by the Presidential Decree

The Council shall consist of up to 15 members including a Chairperson.

The Prime Minister shall chair the Council whose members include the relevant Minister(s), President of the National Measurement Standards Institution designated by the Article 13 (subsection 2) of this Act, and those appointed by the Prime Minister (hereinafter referred to as the "appointed members") in consideration of their expertise of standards science and technology.

The Council shall name a Secretary; for which the Minister of Commerce, Industry and Energy is responsible.

The appointed members shall hold office for three (3) years.

The Council shall operate an executive committee, to be managed by the Secretary of the Council, entrusted to study, review and coordinate the matters to be discussed by the Council.

Matters on the operation of the Council, membership of the executive committee, and other necessary matters shall be prescribed by the Presidential Decree.

Article 6 (Execution of Decisions by the Council) The decisions made by the Council should be respected, reflected, and materialized by the relevant Minister(s) and the local governments in working out their policy and programs, the action plan and achievements of which should be reported to the Council.

Article 7 (Basic Plan of National Standards System)

The Government shall work out the basic plan of the national standards system (hereinafter referred to as the "Basic Plan"), to be renewed every five (5) years, with a view to promoting the national standards system, etc.

The Basic Plan, worked out by the Minister of Commerce, Industry and Energy in consideration of the plans of the relevant Ministers, shall be established by the review and decision at the Council.

The Basic Plan should detail the followings:

1. establishment, maintenance, and management of the national standards system;
2. establishment and maintenance of the measurement standards by the Korea Standards Institution;
3. maintenance, development, and mutual compatibility of the standard documents operated by the ministries and governmental agencies;
4. R&D of the standards science and technology;
5. mutual recognition agreements with other countries and on the cooperations with international organizations concerned;
6. education and training of manpower in the field of standards science and technology;
7. financing and operation of resources for the standardization activities of the ministries and governmental agencies; and
8. Other matters on the national standards system as appropriate.

Procedures of working out the Basic Plan and other necessary aspects shall be determined by the Presidential Decree.

Article 8 (Action Plan of National Standards)

In accordance with the Basic Plan, the relevant Minister(s) shall work out and execute the annual action plan of national standards system (hereinafter referred to as the "Action Plan").

The relevant Minister(s) should present report of the annual achievements together with the next year's plan to the Council for its review.

The relevant Minister(s) shall secure funds for financing its Action Plan(s) prior to its any other business.

Other matters required for the Action Plan shall be prescribed by the Presidential Decree.

Chapter III. Advancement of National Standards System

Article 9 (Classification of Units of Measurement) The units of measurement are divided, in accordance with the International System of Units (SI), into base and derived units.

Article 10 (Base Units)

The following seven units are called base units:

1. the meter, the unit of length;
2. the kilogram, the unit of mass;
3. the second, the unit of time;
4. the kelvin, the unit of thermodynamic temperature;
5. the candela, the unit of luminous intensity;
6. the ampere, the unit of electric current;

8. the mole, the unit of the amount of substance.

The definitions and realizations of base units in the preceding subsection shall be prescribed by the Presidential Decree, to be based on the decision made by the General Conference on Weights and Measures (CGPM).

Article 11 (Derived Units) Derived units are formed as products of power of the base units according to the combination of base units or the combination of base units and other derived units; the derived units and their definitions shall be prescribed by the Presidential Decree, in accordance with the International System of Units (SI).

Article 12 (Units outside the SI)

Units outside the SI may be determined, if required, by other laws and regulations subject to the approval of the Council.

Units other than those stated in the Article 10, Article 11, and Article 12 (subsection 1) of this Act shall not be used as the units of legal measurement.

Article 13 (National Institution of Measurement Standards)

The Korea Research Institute of Standards and Science (hereinafter referred to as "KRISS"), created by the law on the establishment, operation and promotion of the Government-supported Research Institutes, shall be responsible for the maintenance and custody of the national primary standards, for the research, development and dissemination of measurement standards, for exchange and cooperation with foreign standards institutes and other relevant tasks entrusted by the Government; for the purpose of this Act, hereinafter KRISS is referred to as the Korea Standards Institution (hereinafter referred to as the "KSI").

KSI shall be designated by this Act to serve as the National Measurement Standards Institution representing the Government of the Republic of Korea.

By this Act, the National Measurement Standards Advisory Committee (hereinafter referred to as the "Advisory Committee") may be operated by KSI, intended to provide in-depth knowledge and expertise on measurement standards for the activities of the Council; members of the Advisory Committee include heads of standards institutes, and other experts of measurement standards.

Article 14 (National Calibration System)

The Government shall establish the national calibration system to improve the traceability of all the measuring instruments used nation-wide to the national measurement standards.

The Government should make contribution to enhancing the national competitiveness, by promoting and taking advantage of the national calibration network thereby, which enables to provide periodic calibration services to all the measuring instruments used by industry including small and medium business and to disseminate advanced measurement science and technology, leading to higher value added to domestic products.

The Minister of Commerce, Industry and Energy may designate the national calibration laboratories in order to establish the national calibration system.

Requirements for the designation and operation of the national calibration laboratories as mentioned in the preceding subsection shall be prescribed by the Presidential Decree.

Article 15 (Reference Materials)

The Government shall be responsible for encouraging the development, production and supply of various kinds of certified reference materials required for the calibration of measuring instruments, precision measurement, and evaluation of materials properties, and to be used widely in the sectors of industry, science and technology, education, etc. Details of the certification and supply of reference materials shall be determined by the Presidential Decree.

Article 16 (Reference Standards)

The Government shall be responsible for the establishment, evaluation and systematic dissemination of standard reference data enough to meet the demands for the advancement of industry, science and technology and for the realization of information society.

Details of the establishment and dissemination of reference standards shall be determined by the Presidential Decree.

Article 17 (Legal Metrology)

The Government shall establish its legal metrology system, in order to establish just and fair transaction practices and to further promote the nation's economy, which should be in harmony with international standards and regulations concerned.

Provisions of Weights and Measures Act shall be applicable to the activities related to the legal metrology.

Article 18 (Industrial Standards)

The Government shall establish and disseminate industrial standards in order to provide quality products and services especially in the fields of the mining and manufacturing industries, to enhance the productivity and manufacturing techniques, to allow just and simplified transaction and reasonable consumer practices, which in all together will help improve the industrial competitiveness in the global markets.

Provisions of Industrial Standardization Act shall be applicable to the activities related to the establishment and dissemination of industrial standards.

Article 19 (Promotion Programs of National Measurement Standards)

The relevant Minister(s) shall carry out its appropriate promotion programs of the establishment, maintenance and development of the national measurement standards system.

The Minister of Commerce, Industry and Energy shall be responsible for securing funds for and financing all or part of the promotion programs of the establishment of national measurement standards to be carried out by the relevant ministries.

Procedures and other matter required for carrying out the promotion programs of the establishment of national measurement standards shall be detailed by the Presidential Decree.

Chapter IV. Operation and Management of National Measurement Standards System

Article 20 (Overall Management of National Documentary Standards System)

The Government shall make effort to get its industrial standards, information and communications standards, environmental criteria, health and safety regulations in harmony with international standards concerned.

In making its national standards, the Government shall consider having them as harmonized as possible with the relevant international standards, if available; any new standards should be reported in detail to the World Trade Organization (WTO) in due time.

The Minister of Commerce, Industry and Energy shall be in charge of the overall management of the national documentary standards system and take steps required to allow the people easier access to the standards information.

The relevant minister(s) shall, upon request of the Minister of Commerce, Industry and Energy, be responsible for support in providing materials and information on the law and regulations in question.

Article 21 (Conformity Assessment)

The Government shall carry out the programs of the accreditation of conformity assessment system and certification while making effort in getting the procedures of setting standards and of conformity assessment to be in harmony with international guide and standards (hereinafter referred to as the "international criteria").

Accreditation and certification programs for the establishment of conformity assessment system, subject to the preceding subsection, shall include the followings:

1. development and dissemination of industrial standards;
2. establishment of product certification system;
3. accreditation of test and inspection laboratories;
4. accreditation of calibration laboratories;
5. certification of quality and environment management system;
6. international recognition of standards and conformity assessment;
7. approval of standards and criteria made by the private organizations; and
8. system certification and other matters required for any new certification system.

Article 22 (Product Certification)

In advance of introducing a product certificate system, the relevant Minister(s) shall consult the Minister of Commerce, Industry and Energy.

The Minister of Commerce, Industry and Energy shall be responsible for review, based on international criteria concerned, of any new product certificate system to be introduced; the result of which should be reported to the Council for approval.

Article 23 (Accreditation of Test and Inspection Laboratories)

Subject to the Article 21 of this Act, the Government shall take measures necessary for having advanced accreditation scheme of test and inspection laboratories, intended to establish standards and conformity assessment system.

Other details of the designation of accreditation bodies and those in charge of operation of accreditation system, accreditation criteria and appropriate procedures shall be prescribed by the Presidential Decree.

In adopting the accreditation system of test and inspection laboratories, the relevant Minister(s) shall have the accreditation bodies, stated in the preceding subsection, work on it.

Article 24 (Quality Management System and Environmental Management System)

The Government may adopt, in order to facilitate the quality and environmental management practices by industry and other sectors as required, the ISO 9000 series of standards for quality management system and the ISO 14000 series for environmental management system respectively.

For the purpose of the efficient management and operation of the quality and environmental management system, the Minister of Commerce, Industry and Energy may utilize the private organization with proper competence in this area.

Provisions of Quality Management Promotion Act shall be applicable to matters on the certification, management and operation of quality management system; those of the Act on the Promotion of the Conversion into Environment-Friendly Industrial Structure shall be applicable to the certification, management and operation of environmental management system.

Article 25 (Mutual Recognition of Conformity Assessment)

The Government shall encourage mutual recognition agreements on conformity assessment between the Korean accreditation bodies and the relevant international organizations.

The Minister of Commerce, Industry and Energy shall recommend the relevant organizations that the mutual recognition agreement, as stated in the preceding subsection, be in harmony with the WTO's Agreement on Technical Barriers to Trade, fulfilling the requirements for just practices provided by the relevant international criteria.

Article 26 (International Cooperations)

The Government shall make effort that the Korean standards organizations may keep and promote cooperations with international and foreign standards organizations for academic and technological exchanges among them.

Article 27 (Government Contributions)

For the purpose of promoting the national standards and international cooperations, contributions and other assistances from the Government shall be made available to cover expenses for the followings:

1. R&D of standards technology as stated in the Article 7 (item 4 of the subsection 3) of this Act;
2. international cooperations as stated in the Article 7 (item 5 of the subsection 3) of this Act;
3. education of standards manpower as stated in the Article 7 (item 6 of the subsection 3) of this Act;

4. operation and support of the National Institution of Measurement Standards as stated in the Article 13 (subsection 1) of this Act;
5. development and supply of reference materials as stated in the Article 15 (subsection 1) of this Act;
6. development and dissemination of documentary standards as stated in the Article 16 (subsection 1) of this Act;
7. promotion programs of the national measurement standards as stated in the Article 19 (subsection 1) of this Act;
8. planning and survey on the establishment of national documentary standards and its overall management as stated in the Article 20 (subsection 1) of this Act;
9. programs of the establishment of conformity assessment system as stated in the Article 21 (subsection 2) of this Act;
10. laying basis for the advancement of industrial structure as stated in the Article 28 (subsection 1) of this Act; and
11. Other tasks according to the decisions made by the Council.

Details of the Government contributions as stated in the preceding subsection shall be prescribed by the Presidential Decree.

Article 28 (Advancement of Industrial Structure)

The Government shall be responsible for working out a comprehensive plan for the advancement of industrial structure, the prerequisites for which include the development of measurement science and technology of high accuracy, test/inspection and calibration services, and related instrumentation industry.

The Minister of Commerce, Industry and Energy shall, subject to the preceding subsection, provide proper measures to put the comprehensive plan forward, and if necessary, may create or designate an organization in charge of this task.

Article 29 (Development of Manpower)

The Government shall work and carry out the education and training programs intended to develop skilled manpower in the field of standards science and technology.

Article 30 (Personnel Management of Government Officials Engaged in National Standards System)

The relevant Minister(s) shall operate a separate personnel management by its own rules or regulations, so as to secure professionalism, continuity, and credibility of jobs done by the officials in charge of national standards system, conformity assessment system, etc

Chapter V. Supplementary Provisions

Article 31 (Delegation or Entrustment of Authority)

The Minister of Commerce, Industry and Energy may delegate a part of his authority as prescribed by this Act to the Mayor of Seoul Special Metropolitan City, Metropolitan City Mayors or Do governor and the heads of their agencies, under the conditions as prescribed by the Presidential Decree.

The Minister of Commerce, Industry and Energy may entrust a part of his authority, as prescribed by this Act and in accordance with the Presidential Decree, to the head of

another administrative agency, government-supported research institute, institution of national measurement standards, standards organization, or association founded on the civil law and special laws.

Addenda

(Enforcement Date) This Act shall enter into force on July 1, 1999.

(Transition Measures concerning National Standards)

In case where any activities relating to the establishment, maintenance, and dissemination of national standards have been done on the basis of other laws and regulations at the time this Act enters into force, and if there are corresponding provisions in this Act, such activities shall be considered to have been done pursuant to the provisions of this.

Appendix 2
Summary of 'Consolidated Public Notice'

The Consolidated Public Notice is based on the 'Foreign Trade Act', the fundamental rule of international trade in Korea. The Notice, which aims at encouraging clear and simple import licensing/customs procedures and maintaining Korea's trade policy directions, incorporates and publishes import-related procedures or requirements ordained by certain laws other than the Act.

The following tables briefly describe the import-related procedures or requirements incorporated in the Notice. Each ministry takes charge of application of the laws whose procedures or requirements fall under its authority.

(1) Ministry of Commerce, Industry and Energy

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Petroleum Business Act	crude oil, petroleum	import recommendation or quality inspection	Korea Petroleum Association
The Act of Control on the Production etc. of Specified Substances for the Protection of the Ozone Layer	controlled substances on Montreal Protocol	import permission	the Ministry
Electrical Appliances Safety Control Act	designated electrical appliances which can cause danger or injury	model and type approval or import report	Korean Agency for Technology and Standards
Quality Management & Industrial Products Safety Control Act	designated consumer products which can cause danger or injury	safety inspection	.FITI Testing and Research Institute .Korea Machinery, Metal and Petrochemical Testing and Research Institute .Korea Testing and Research Institute for Chemical Industry .Korea Merchandise Testing and Research Institute
Weights and Measures Act	legal measuring instruments	verification	.Korea Machinery, Metal and Petrochemical Testing and Research Institute
Act on Control of the Production, Export, Import, etc. Specific Chemicals for the Prohibition of Chemical Weapons	schedule 1 chemicals 9	import permission	the Ministry

(2) Ministry of Agriculture and Forestry

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Food Grain Management Act	rice	import permission	the Ministry
Fertilizer Management Act	agricultural fertilizer	.import eligibility restriction .import recommendation for test/research use	the Ministry
Agochemicals Management Law	agrochemicals	registratrion for manufacturing or import business	the Ministry
Livestock Epidemics Prevention & Control Act	animals and animal products	restriction of origin and quarantine	National Veterinary Research and Quarantine Service
Plant Protection Act	plants and plant products	quarantine and restriction of imported items and origin	National Plant Quarantine Service
Major Agricultural Crop Seeds Act	crop seeds	import report and adaptability test	National Seed Management Office
Seedings Management Act	vegetable seeds for sale	adaptability test	Korea Seed Association
	fruit trees for sale		Rural Development Administration
Livestock Act	pure-bred breeding stocks	import report	.Korea Animal Improve- ment Association .Korea Poultry Association
Pharmaceutical Act	veterinary medicine	import permission	the Ministry
		import report	Korea Animal Health Product Association
Ginseng Industry Law	ginseng	import report	National Agricultural Product Inspection Office

(3) Ministry of Marine Affairs and Fisheries

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Fisheries Act	marine animals and plants	.transplanting approval .limitation of the length or period of imported fisheries	the Ministry

(4) Ministry of Finance and Economy

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Foreign Exchange Management Act	coinage, banknotes, securities	import report	foreign exchange banks
		import permission	The Bank of Korea
Tobacco Business Act	tobacco seeds	import eligibility restriction	the Ministry

(5) Ministry of Science and Technology

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Atomic Energy Act	nuclear materials	operation permission and import report	the Ministry
	radioisotope, radiation generators		Korea Radioisotope Association

(6) Ministry of Health and Welfare

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Pharmaceutical Act	finished pharmaceuticals	import report	permission: the Ministry report: Korea Pharmaceutical Traders Association
	materials for medicine or for herbal drugs	import report	Korea Pharmaceutical Traders Association
	medical devices	import report	Korea Medical Instruments Industrial Cooperative
Act relating to Narcotics	narcotics	import prohibition or permission	the Ministry
	cannabis		
	Psycotropic Substances		Korea Pharmaceutical Traders Association
Food Sanitation Act	food, food additives, apparatus, container and package	import report	National Quarantine Station or Regional Food and Drug Admin.
Quarantine Act	designated products	quarantine inspection	National Quarantine Station or Regional Food and Drug Admin.

(7) Ministry of Labor

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Industrial Safety & Health Act	harmful substances (e.g. yellow phosphorous matches, benzidine)	import prohibition approval for research/laboratory work	local labor administrations
	new chemical substances (e.g. chemical elements, radioactive substances)	toxicity test report submission	the Ministry
	safeguarding measures (e.g. safeguarding measures against press)	quality test	Korea Industrial Safety Corporation
	harmful or hazardous equipments (e.g. cranes, lifts)	design test for safety	
	protective equipments (e.g. safety helmet)	type test	

(9) Ministry of Information-Communication

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Radio Waves Act	apparatus of radio equipment	model and type inspection	Radio Research Laboratory
	EMI or EMC equipment	authentication	
Telecommunications Basic Act	telecommunication equipment	model and type approval	Radio Research Laboratory

(10) Ministry of Culture and Sports

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Act relating to Import and Distribution of Foreign Publications	foreign publications	import recommendation	the Ministry
Motion Picture Promotion Act	motion picture	import recommendation	the Ministry
Act relating to Records and Video Works	record	import report	Korea Ethics for Performing Arts Committee
Cultural Properties Protection Act	cultural properties	export permission	the Ministry

(11) Ministry of National Defense

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Special Measure Act relating to Defense Industry	military products	import permission	the Ministry

(12) National Police Agency

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Firearms, Swords, Explosives, etc. Control Act	firearms, swords and explosives	import permission	the Agency

(13) Ministry of Environment

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Toxic Chemicals Control Act	toxic substances	import prohibition or item registration	local governments, environmental management offices or regional environmental management offices
	chemical substances	import notification	the Ministry
Natural Environment Preservation Act	animals and plants detrimental to ecosystem, endangered wild animals and plants	import approval	environmental management offices or regional environmental management offices
Drinking Water Management Act	bottled water, water treatment chemicals and its container	import report	environmental management offices or regional environmental management offices
Wastes Control Act	wastes	import prohibition or import report	the Ministry
Noise and Vibration Regulation Act	motor vehicle, etc.	authentication	National Institute of Environmental Research
Atmospheric Environment Preservation Act	motor vehicle, etc.	authentication	National Institute of Environmental Research
The Law concerning Protection of Wildlife and Game	wildlife animals	import permission	the Administration, local governments

(14) Ministry of Construction and Transportation

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Motor Vehicles Control Act	motor vehicles	model and type approval	the Ministry
Construction Machines Control Act	construction machines	model and type approval	the Ministry

(15) National Tax Administration

Law	Product Covered	Import Procedure /Requirement	Related Admin. Organization
Liquor Tax Act	Liquor	import eligibility approval	district tax offices

Endnotes

1. Memorandum of Understanding between the National Institute of Standards and Technology and the Korean Agency for Technology (May 9, 2000)
2. International Trade Administration (ITA) / Department of Commerce (DOC). Homepage, Export Statistics Express < <http://ese.export.gov/ITA2002/>>
3. Ministry of Commerce, Industry & Energy (MOCIE) Homepage, "What's New ?" No 76 Export and Import in 2001, January 17, 2002
<<http://www.mocie.go.kr/eng/news/>>
4. Department of Commerce (DOC) Homepage
5. White paper on Technology and Standards in Korean (2002)
6. KS Catalogue on Korean Industrial Standards (2001)

Bibliography

International Trade Administration (ITA) / Department of Commerce (DOC). Homepage, Export Statistics Express < <http://ese.export.gov/ITA2002/>>

Ministry of Commerce, Industry & Energy (MOCIE) Homepage, "What's New?" No 76 Export and Import in 2001, January 17, 2002 < <http://www.mocie.go.kr/eng/news/>>

Korean Agency for Technology and Standards (KATS) Homepage
< <http://www.ats.go.kr> >

White Paper on Standards and Conformity Assessment in Korea, Korean Agency for Standards & Technology, January 2001 (Korean Edition)

Korea Accreditation Board Homepage, < <http://www.kab.or.kr> >

Korean Standards Catalogue. 2001. Korean Agency for Technology & Standards (KATS)

Korean Information Service Homepage <<http://www.korea.net>>.

Korea Trade Investment Promotion Agency (KORTA) Homepage
< <http://www.kotra.or.kr> >

Korea International Trade Association (KITA) Homepage < <http://www.kita.or.kr>>

Korea Export Insurance Corporation (KEIC) Homepage <<http://www.keic.or.kr>>

Korean Commercial Arbitration Board (KCAB) < <http://www.kcab.or.kr>>

