

DEPARTMENT OF COMMERCE
BUREAU OF STANDARDS
WASHINGTON, D.C.

Letter
Circular
LC-285

AERONAUTICAL PUBLICATIONS BY MEMBERS OF THE STAFF
OF THE BUREAU OF STANDARDS

(July 9, 1930)

Contents

Aerodynamics.
Aircraft materials and construction.
Aeronautic power plants.
Aircraft instruments.
Radio aids to air navigation.
Miscellaneous.

The papers listed in this letter circular are not obtainable from the Bureau of Standards unless otherwise stated. Copies may be consulted in the libraries of large cities. Where the price is listed, copies may still be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. The prices given are for delivery to addresses in the United States and its possessions, Canada, Cuba, Mexico, Newfoundland, and the Republic of Panama; for delivery to other countries add one-third of price of paper in your remittance.

Publications marked (*) are out of print and not obtainable either free or for sale. "Technical Notes" not so marked may be obtained without charge from the National Advisory Committee for Aeronautics.

Copies of "Technical Reports" now out of print will be found in the annual volumes of the National Advisory Committee for Aeronautics. These volumes are available for reference or loan in the libraries of large cities and in the Office of Aeronautical Intelligence, National Advisory Committee for Aeronautics, Washington, D. C. A table showing the Technical Reports included in each annual volume is noted below. The third, thirteenth and fourteenth volumes may still be purchased from the Superintendent of Documents at the prices indicated.

Annual volume	Year	Containing Tech.Reports Nos.	Annual volume	Year	Containing Tech.Reports Nos.
First	1915	1-7	Eighth	1922	133-158
Second	1916	8-12	Ninth	1923	159-185
Third	1917	13-23 (\$1.50)	Tenth	1924	186-209
Fourth	1918	24-50	Eleventh	1925	210-232
Fifth	1919	51-82	Twelfth	1926	233-256
Sixth	1920	83-110	Thirteenth	1927	257-282 (\$1.25)
Seventh	1921	111-132	Fourteenth	1928	283-308 (\$1.25)

Papers noted under "Published by other parties" are not obtainable from the Bureau of Standards. They may be consulted in libraries maintaining a file of scientific and technical literature, or obtained from the publishers.

AERODYNAMICS

Published by the Bureau of Standards:

Series No.	Title
S394	Air forces on circular cylinders, axes normal to the wind, with special reference to dynamical similarity. H. L. Dryden. (Sept. 4, 1920) 5¢.
S523	Wind pressure on structures. H. L. Dryden and G. C. Hill. (Apr. 3, 1926) 20¢.
M46	War work of the Bureau of Standards. (Apr. 1, 1921) 70¢.

Published by the National Advisory Committee for Aeronautics (Washington, D. C.):

Series No.	Title
Technical Note 129*	Notes on aerodynamic forces on airship hulls. L. B. Tuckerman. (March, 1923) Supply exhausted.

Technical Reports Nos.	Title.
207*	Aerodynamic characteristics of airfoils at high speeds. L. J. Briggs, G. F. Hull and H. L. Dryden. (1925)
231	Investigation of turbulence in wind tunnels by a study of the flow about cylinders. H. L. Dryden and R. H. Heald. (1926) 10¢.
255	Pressure distribution over airfoils at high speeds. L. J. Briggs and H. L. Dryden. (1927) 15¢.
298	Effect of variation of chord and span of ailerons on rolling and yawing moments in level flight. R. H. Heald and D. H. Strother. (1928) 10¢.
319	Aerodynamic characteristics of twenty-four airfoils at high speeds. L. J. Briggs and H. L. Dryden. (1929) 15¢.
320	The measurement of fluctuations of air speed by the hot wire anemometer. H. L. Dryden and A. M. Kuethe. (1929) 15¢.
342	Effect of turbulence in wind tunnel measurements. H. L. Dryden and A. M. Kuethe. (1930) 10¢.
343	Effect of variation of chord and span of ailerons in rolling and yawing moments at several angles of pitch. R. H. Heald, D. H. Strother, and B. H. Monish. (1930) 15¢.

Published by other parties:

International Critical Tables, Vol. 1, 1926. Section on aerodynamics. Pp. 402-411. L. J. Briggs and H. L. Dryden. (McGraw-Hill Pub. Co., New York, N. Y.)

AIRCRAFT MATERIALS AND CONSTRUCTION

Published by the Bureau of Standards:

Series No.	Title
S337*	Constitution and metallography of aluminum and its light alloys with copper and with magnesium. P. D. Merica, R. G. Waltenberg, and J. R. Freeman, jr. (Aug. 16, 1919)

AIRCRAFT MATERIALS AND CONSTRUCTION (Cont.)

Published by the Bureau of Standards:(Cont.)

Series No.	Title
S347	The heat treatment of duralumin. P. D. Merica, R. G. Waltenberg, and H. Scott. (Nov. 15, 1919) 10¢.
S426	Thermal expansion of nickel, monel metal, stellite, stainless steel, and aluminum. Wilmer Souder and P. Hidnert. (Dec. 17, 1921) 10¢.
S497	Thermal expansion of aluminum and various important aluminum alloys. P. Hidnert. (Jan. 9, 1925) 15¢.
S565	Thermal expansion of beryllium and aluminum-beryllium alloys. P. Hidnert and W. T. Sweeney. (Oct. 29, 1927) 10¢.
T113*	Determination of permeability of balloon fabrics. J. D. Edwards. (July 2, 1918)
T139*	Some tests of light aluminum casting alloys - The effect of heat treatment. P. D. Merica and C. P. Karr. (Oct. 24, 1919)
T152*	Investigation of the compressive strength of spruce struts of rectangular cross section and the derivation of formulas suitable for use in airplane design. J. E. Boyd. (Apr. 10, 1920)
T258	Strength of steel tubing under combined column and transverse loading, including tests of columns and beams. Tom W. Greene. (May 23, 1924) 15¢.
T270	An analysis of the deformation of the mooring spindle of the Shenandoah. L. B. Tuckerman and C. S. Aitchison. (Jan. 9, 1925) 10¢.
T275	Design of specimens for short-time "fatigue" tests. L. B. Tuckerman and C. S. Aitchison. (Dec. 22, 1924) 5¢.
T346	Electrodeposition of chromium from chromic acid baths. H. E. Haring and W. P. Barrows. (June 10, 1927) 15¢.
C346	Light metals and alloys; aluminum; magnesium. (Dec. 12, 1927) \$1.10.
USGMS258b	Cloth, airplane, mercerized cotton, grade A. (July 24, 1929) 5¢.

AIRCRAFT MATERIALS AND CONSTRUCTION (Cont.)

Published by the Bureau of Standards:(Cont.)

Series No.	Title
M46	War work of the Bureau of Standards. (Apr. 1, 1921) 70¢.
RP29	Thermal expansion of magnesium and some of its alloys. P. Hidnert and W. T. Sweeney. (November, 1928) 10¢.
RP63	Soundproofing of airplane cabins. V. L. Chrisler and W. F. Snyder. (May, 1929) 5¢.

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Circular

VII-1-12 Fire-proof and transparent airplane wing coverings.
L. B. Tuckerman. (Dec. 1, 1919) Free on application
to Bureau of Standards.

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Circular

VII-1-16 and 18a Proposed aeronautical specifications; streamline stay
wires. (Jan. 16, 1922) Free on application to Bureau
of Standards.

Published by the National Advisory Committee for Aeronautics
(Washington, D. C.):

Series No.	Title
Tech.Report 35*	The strength of one-piece, solid, built-up, and laminated wood airplane wing beams. John H. Nelson. (From N. A. C. A. Fourth Annual Report - 1918)
Tech. Report 77*	Parker variable camber wing. Humphrey F. Parker. From Fifth Annual Report of N.A.C.A., 1919. Available as part of Fifth Annual Report. Cannot be purchased separately.
Tech. Report 210	Inertia factors of ellipsoids for use in air- ship design. L. B. Tuckerman. (From 11th Annual Report of N.A.C.A., 1925) 5¢.
Tech. Report 211	Water model tests for semirigid airships. L. B. Tuckerman. (From 11th Annual Report of N.A.C.A., 1925) 5¢.

AIRCRAFT MATERIALS AND CONSTRUCTION (Cont.)

Published by the National Advisory Committee for Aeronautics
(Washington, D. C.): (Cont.)

Series No.	Title
Tech. Note 78*	Impact tests for woods. (February, 1922)
Tech. Note 282	Corrosion embrittlement of duralumin. I. Practical aspects of the problem. H. S. Rawdon. (Apr. 1928) Free on request to N.A.D.A.
Tech. Note 283	Corrosion embrittlement of duralumin. II. Accelerated corrosion tests and the behavior of high-strength aluminum alloys of different compositions. H. S. Rawdon. (Apr. 1928) Free on request to N.A.C.A.
Tech. Note 284	Corrosion embrittlement of duralumin. III. Effect of the previous treatment of sheet material on the susceptibility to this type of corrosion. H. S. Rawdon. (April, 1928) Free on request to N.A.C.A.
Tech. Note 285	Corrosion embrittlement of duralumin. IV. The use of protective coatings. H. S. Rawdon. (April, 1928) Free on request to N.A.C.A.
Tech. Note 304	Corrosion embrittlement of duralumin. V. Results of weather-exposure tests. H. S. Rawdon. (March, 1929) (Also appeared as Technical Publication No. 173, American Institute of Mining and Metallurgical Engineers, 29 West 39th St., New York, N. Y., February, 1929 meeting.) Free on request to N.A.C.A.
Tech. Note 305	Corrosion embrittlement of duralumin. VI. The effect of corrosion accompanied by stress on the tensile properties of sheet duralumin. H. S. Rawdon. (May, 1929) (Also appeared as Preprint 42, American Society for Testing Materials, 1315 Spruce St., Philadelphia, Pa., June, 1929, meeting.) Free on request to N.A.C.A.
Tech. Note 307	Strength of tubing under combined axial and transverse loading. L. B. Tuckerman, S. N. Petrenko, C. D. Johnson. (June, 1929) Free on request to N.A.C.A.

AIRCRAFT MATERIALS AND CONSTRUCTION (Cont.)

Published by other parties:

- Report on dirigible design. Engineering News-Record (10th Ave. & 36th St., New York, N. Y.), Vol. 89, No. 26, p. 1137; Dec. 28, 1922.
- Discussion on tests of thin gage metals. H. L. Whittemore. Proceedings, American Society Testing Materials (1315 Spruce St., Philadelphia, Pa.), Vol. 24, Part II, pp. 1006-1011; 1924.
- Tests of ball bearings for rotating beam fatigue machines. L. B. Tuckerman and C. S. Aitchison. American Machinist (10th Ave & 36th St., New York, N. Y.), Vol. 61, No. 10, p. 369; Sept. 4, 1924.
- Metal airplane wing patent. H. L. Whittemore. Patent No. 1,516,480 (Issued Nov. 18, 1924) Price on application to Superintendent of Documents, Government Printing Office, Washington, D. C.
- Duralumin as a structural material. G. K. Burgess. Scientific American (24 W. 40th St., New York, N. Y.), pp. 51-52, January, 1925.
- Properties of Duralumin (corrosion). Engineering News-Record (10th Ave. & 36th St., New York, N. Y.), Nov. 26, 1925, No. 22, pp. 862-863; Dec. 17, 1925, Vol. 95, No. 25, pp. 979, 1000, 1001, 1006; Jan. 7, 1926, Vol. 96, No. 1, pp. 1, 34.
- Discussion of Templin's paper "Effect of size and shape of test specimen on tensile properties of thin sheet metal." H. L. Whittemore. Proceedings, American Society for Testing Materials (1315 Spruce St., Philadelphia, Pa.), Vol. 26, Part II, p. 401, 1926.
- Discussion: Tension testing of thin sheet metal by Templin. H. L. Whittemore. Proceedings, American Society for Testing Materials (1315 Spruce St., Philadelphia, Pa.), Vol. XXVII, Part II, Technical Papers p. 256, 1927.
- Steel requirements of the aircraft industry. H. J. French. American Iron and Steel Institute Yearbook, 1928, p. 350 (40 Rector St., New York, N. Y.)
- The investigation of welded joints for aircraft by the Bureau of Standards. W. I. Gaston. Aviation Engineering (Lyon Block, Albany, N. Y.), Vol. I, No. 1, p. 9; October, 1928.
- Testing joints for aircraft structures welded under procedure specifications. H. L. Whittemore. Journal of the American Welding Society (29 W. 39th St., New York, N. Y.), Vol. VII, No. 12, p. 31; December, 1928.

AIRCRAFT MATERIALS AND CONSTRUCTION (Cont.)

Published by other parties: (Cont.)

Testing welded joints for aircraft structures. H. L. Whittemore. Airway Age (34 N. Crystal St., E. Stroudsburg, Pa.), Vol. 10, No. 2, p. 161; February, 1929.

Silencing the airplane. H. L. Dryden. American Society of Mechanical Engineers (29 West 39th St., New York, N. Y.) Fourth National Aeronautical Meeting, Dayton, Ohio, May, 1930.

AERONAUTIC POWER PLANTS

Published by the Bureau of Standards:

Series No.	Title	
S424	Mathematical theory of induced voltage in the high-tension magneto. F. B. Silsbee. (Dec. 13, 1921)	15¢.
T211	Radiators for aircraft engines. S. R. Parsons and D. R. Harper 3d. (May 25, 1922.)	50¢.
T287	A hot-wire anemometer for measuring air flow through engine radiators. C. G. F. Zobel and L. B. Carroll. (June 18, 1925.)	5¢.
T293	Condensation of water from engine exhaust for airship ballasting. R. F. Kohr. (Aug. 13, 1925.)	25¢.
RP118	Correcting engine tests for humidity. D. B. Brooks. (November, 1929.)	10¢.
M46	War work of the Bureau of Standards. (Apr. 1, 1921.)	70¢.

Published by the National Advisory Committee for Aeronautics (Washington, D. C.):

Series No.	Title	
Tech. Report 43*	Synopsis of aeronautic radiator investigations for the years 1917 and 1918. R. V. Kleinschmidt. (1918)	
Tech. Report 44	The altitude laboratory for the testing of aircraft engines. H. C. Dickinson and H. G. Boutell. (1918)	10¢.

AERONAUTIC POWER PLANTS (Cont.)

Published by the National Advisory Committee for Aeronautics
(Washington, D. C.): (Cont.)

Series No.	Title
Tech. Report 45*	Effect of compression ratio, pressure, temperature, and humidity on power. (1918) Part 1. Variation of horsepower with altitude and compression ratio. H. C. Dickinson, W. S. James, and G. V. Anderson. Part 2. Value of supercharging. H. C. Dickinson and G. V. Anderson. Part 3. Variation of horsepower with temperature. H. C. Dickinson, W. S. James, and G. V. Anderson. Part 4. Influence of water injection on engine performance. V. W. Brinkerhoff.
Tech. Report 46*	A study of airplane engine tests. V. R. Gage. (1918)
Tech. Report 47*	Power characteristics of fuels for aircraft engines. (1918) Part 1. Power characteristics of aviation gasoline. E. W. Roberts. Part 2. Power characteristics of Sumatra and Borneo gasolines. E. W. Roberts. Part 3. Power characteristics of 20 per cent benzol mixtures. E. W. Roberts.
Tech. Report 48*	Carbureting conditions characteristic of aircraft engines. P. S. Tice. (1918)
Tech. Report 49*	Metering characteristics of carbureters. P. S. Tice. (1918)
Tech. Report 59*	General analysis of airplane radiator problems. H. C. Dickinson, W. S. James, and R. V. Kleinschmidt. (1919)
Tech. Report 61*	Head resistance due to radiators. (1919) Part 1. Head resistance of radiator cores. R. V. Kleinschmidt and S. R. Parsons. Part 2. Preliminary report on resistance due to nose radiator. R. V. Kleinschmidt. Part 3. Effect of streamline casing for free-air radiators. S. R. Parsons.
Tech. Report 62*	Effect of altitude on radiator performance. W. S. James and S. R. Parsons. (1919)

AERONAUTIC POWER PLANTS (Cont.)

Published by the National Advisory Committee for Aeronautics
(Washington, D. C.): (Cont.)

Series No.	Title
Tech. Report 63*	Results of tests on radiators for aircraft engines. (1919) Part 1. Heat dissipation of radiators. H. C. Dickinson, W. S. James, and R. V. Kleinschmidt. Part 2. Water flow through radiator cores. W. S. James.
Tech. Report 86*	Properties of special types of radiators. S. R. Parsons. (1920)
Tech. Report 87*	Effects of nature of cooling surface on radiator performance. S. R. Parsons and R. V. Kleinschmidt. (1920)
Tech. Report 88*	Pressure drop in radiator air tubes. S. R. Parsons. (1920)
Tech. Report 89	Comparison of Alcogas aviation fuel with export aviation gasoline. V. R. Gage, S. W. Sparrow, and D. R. Harper. (1920) 5¢.
Tech. Report 90	Comparison of Hector fuel with export aviation gasoline. H. C. Dickinson, V. R. Gage, and S. W. Sparrow. (1920) 5¢.
Tech. Report 102*	Performance of a Liberty 12 airplane engine. S. W. Sparrows and H. S. White. (1920)
Tech. Report 103*	Performance of a 300-horsepower Hispano-Suiza airplane engine. S. W. Sparrow and H. S. White. (1920)
Tech. Report 106*	Turbulence in the air tubes of radiators for aircraft engines. S. R. Parsons. (1920)
Tech. Report 107	A high-speed engine pressure indicator of the balanced diaphragm type. H. C. Dickinson and F. B. Newell. (1920) 5¢.
Tech. Report 108*	Some factors of airplane engine performance. Victor R. Gage. (1920)
Tech. Report 134*	Performance of Maybach 300-horsepower airplane engine. S. W. Sparrow. (1922)

AERONAUTIC POWER PLANTS (Cont.)

Published by the National Advisory Committee for Aeronautics
(Washington, D. C.): (Cont.)

Series No.	Title
Tech. Report 135	Performance of B. M. W. 185-horsepower airplane engine. S. W. Sparrow. (1922) 5¢.
Tech. Report 158*	Mathematical equations for head conduction in the fins of air-cooled engines. D. R. Harper and W. G. Brown. (1922)
Tech. Report 159	Jet propulsion for airplanes. E. Buckingham. (1923) 5¢.
Tech. Report 189*	Relation of fuel-air ratio to engine performance. S. W. Sparrow. (1924)
Tech. Report 190*	Correcting horsepower measurements to a standard temperature. S. W. Sparrow. (1924)
Tech. Report 205*	The effect of changes in compression ratio upon engine performance. S. W. Sparrow. (1924)
Tech. Report 232	Fuels for high-compression engines. S. W. Sparrow. (1925) 10¢.
Tech. Report 262	Friction of aviation engines. S. W. Sparrow and M. A. Thome. (1927) 10¢.
Tech. Note 39*	High thermal efficiency in airplane service. S. W. Sparrow. (1920)
Tech. Note 55*	Airplane crashes - engine troubles. A possible explanation. S. W. Sparrow. (1921)
Tech. Note 108*	The use of multiplied pressures for automatic altitude adjustments. S. W. Sparrow. (1922)
Tech. Note 210*	The testing of aviation engines under approximate altitude conditions. R. W. Dubois. (1924)

Published by other parties:

The design of cooling surface for air-cooled engines. W. B. Brown. Automotice Industries (56th & Chestnut Sts., Philadelphia, Pa.), Vol. XLII, No. 24, p. 1352; June 10, 1920.

AERONAUTIC POWER PLANTS (Cont.)

Published by other parties: (Cont.)

- Flying an airplane engine on the ground. S. W. Sparrow. S. A. E. Journal (29 W. 39th St., New York, N. Y.), Vol. 6, No. 4, p. 239; April, 1920.
- Design factors for airplane radiators. S. R. Parsons. S. A. E. Journal (29 W. 39th St., New York, N. Y.), Vol. 6, No. 6, p. 437; June, 1920.
- Compression ratio and thermal efficiency of airplane engines. S. W. Sparrow. S. A. E. Journal (29 W. 39th St., New York, N. Y.), Vol. 8, No. 5, p. 424; May, 1921.
- Radiators for aircraft engines. S. R. Parsons and D. R. Harper 3d. Journal of Washington Academy of Sciences (Washington, D. C.), Vol. II, No. 17, p. 409; Oct. 19, 1921.
- Condensation of water from engine exhaust for airship ballasting. R. F. Kohr. Air Service Information Circular (Acrostation), (Air Corps, Wright Field, Dayton, Ohio), Vol. 1, No. 44; May 1, 1924.
- Effect of altitude on engine power revealed by Bureau tests. Automotive Industries (56th & Chestnut Sts., Philadelphia, Pa.), Vol. L, No. 21, p. 1126; May 22, 1924.
- Heat transfer in the condensation of water from engine exhaust gas. R. F. Kohr and L. Butler. Journal of Industrial and Engineering Chemistry (810 - 18th St., N.W., Washington, D. C.), Vol. 16, No. 9, p. 885; September, 1924.
- Aviation engine performance. S. W. Sparrow. Journal of Franklin Institute (Philadelphia, Pa.), Vol. 200, No. 6, p. 711; December, 1925.
- Safety in a research laboratory. R. N. DuBois. Safety Engineering (119 Nassau St., New York, N. Y.), Vol. 52, No. 1, p. 27; July 1, 1926.
- Laboratory and service tests for engine safety. H. C. Dickinson. Trans. 17th Annual Safety Conference (National Safety Council, New York, N. Y.), Vol. 52, No. 1, pp. 444-448; October, 1928.
- Development and testing of commercial aircraft engines from the point of view of safety and regulation. H. C. Dickinson. Proceedings, International Civil Aeronautics Conference, December 12-14, 1928. Sold by Superintendent of Documents, Government Printing Office, Washington, D. C., at 45 cents per copy.

AERONAUTIC POWER PLANTS (Cont.)

Published by other parties: (Cont.)

- Laboratory and service test for engine safety. H. C. Dickinson. Aeronautical World (1709 W. Eighth St., Los Angeles, Calif.), January, 1929.
- Commercial aircraft engines. H. C. Dickinson. Aero Digest (220 W. 42nd St., New York, N. Y.), Vol. 14, No. 4, p. 102; April, 1929.
- Type testing of commercial airplane engines of medium power. H. K. Cummings. Aeronautical Engineering (Transactions of American Society of Mechanical Engineers, 29 W. 39th St., New York, N. Y.), Vol. 1, No. 2, p. 45; April-June, 1929.
- Failures of aircraft engine parts and causes thereof. T. T. Neill. (In Press) Proceedings, American Society Testing Materials (1315) Spruce St., Philadelphia, Pa.)
- The vapor locking tendency of aviation gasoline. O. C. Bridgeman and H. S. White. (In Press) S. A. E. Journal, (29 W. 39th St., New York, N. Y.)
- Gasoline requirements of commercial aircraft engines. H. K. Cummings. (In Press) S. A. E. Journal (29 W. 39th St., New York, N. Y.)
- The properties of gasolines with reference to vapor lock. O. C. Bridgeman and E. W. Aldrich. (In Press) S. A. E. Journal, (29 W. 39th St., New York, N. Y.)

AIRCRAFT INSTRUMENTS

Published by the Bureau of Standards:

Series No.	Title
T237	Aeronautic instruments. F. L. Hunt. (May 16, 1923) 20¢.
T247	A new electrical telemeter. Burton McCollum and O. S. Peters. (Jan. 4, 1924) 15¢.
T287	A hot-wire anemometer for measuring air flow through engine radiators. Carl G. F. Zobel and L. B. Carroll. (June 18, 1925) 5¢.
T320	A fabric tension meter for use on aircraft. L. B. Tuckerman, G. H. Keulegan, and H. N. Eaton. (July 24, 1926) 10¢.
T332	Statistical hysteresis in the flexure of bars. G. H. Keulegan. (Nov. 4, 1926) 10¢.

AIRCRAFT INSTRUMENTS (Cont.)

Published by the Bureau of Standards: (Cont.)

- T359 A superheat meter or differential thermometer for airships. D. H. Strother and H. N. Eaton. (Oct. 27, 1927) 10¢.
- RP78 Relative visibility of luminous flashes from neon lamps and from incandescent lamps with and without red filters. F. C. Breckenridge and J. E. Nolan. (July, 1929) 5¢.
- M46 War work of the Bureau of Standards. (Apr. 1, 1921) 70¢.

Published by the National Advisory Committee for Aeronautics (Washington, D. C.):

- | Series No. | Title |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tech. Note 90* | Sylphon diaphragms. A method for predicting their performance for purposes of instrument design. H. N. Eaton and G. H. Keulegan. (1922) |
| Tech. Note 261 | Tension experiments on diaphragm metals. H. B. Henrickson. (1927) Free on request to NACA. |
| Tech. Report 32 | The airplane tensiometer. L. J. Larson. From Fourth Annual Report of N.A.C.A., 1918. 5¢. |
| Tech. Report 110* | The altitude effect on air speed indicators. M. D. Hersey, F. L. Hunt, and H. N. Eaton. (1921) |
| Tech. Report 125 | General classification of instruments and problems, including bibliography. M. D. Hersey. (1922) 5¢. |
| Tech. Report 126 | Altitude instruments. (1922) 15¢.
Part I. Altimeters and barographs. A. H. Mears, H. B. Henrickson, and W. G. Brombacher.
Part II. Precision altimeter design. J. B. Peterson and J. R. Freeman, Jr.
Part III. Statoscopes and rate-of-climb indicators. A. H. Mears.
Part IV. Aerographs and strut thermometers. J. A. C. Warner. |

AIRCRAFT INSTRUMENTS (Cont.)

Published by National Advisory Committee for Aeronautics
(Washington, D. C.): (Cont.)

Series No.	Title
Tech. Report 127	Aircraft speed instruments. (1922) Three parts. Price 10¢. Part I. Air-speed indicators. F. L. Hunt. Part II. Testing of air-speed meters. H. C. Stearns. Part III. Principles of ground speed measurement. F. L. Hunt.
Tech. Report 128	Direction instruments. (1922) Four parts. 15¢. Part I. Inclinometers and banking indicators. W. S. Franklin and M. H. Stillman. Part II. The testing and use of magnetic compasses for airplanes. R. L. Sanford. Part III. Aircraft compasses - Description and classification. J. A. C. Warner. Part IV. Turn indicators. R. C. Sylvander and E. W. Rounds.
Tech. Report 129	Power plant instruments. (1922) Five parts. 15¢. Part I. Airplane tachometers. G. E. Washburn. Part II. Testing of airplane tachometers. R. C. Sylvander. Part III. Thermometers for aircraft engines. E. F. Mueller and R. M. Wilhelm. Part IV. Air pressure and oil pressure gages. H. N. Eaton. Part V. Gasoline depth gages and flowmeters for aircraft. J. A. C. Warner.
Tech. Report 130	Oxygen instruments. F. L. Hunt. (1922) 10¢.
Tech. Report 131	Aerial navigation and navigating instruments. H. N. Eaton. (1922) 10¢.
Tech. Report 132	Recent developments and outstanding problems. F. L. Hunt. (1922) 5¢.
Tech. Report 156*	The altitude effect on air speed indicators. H. N. Eaton and W. A. MacNair, (1922)
Tech. Report 165*	Diaphragms for aeronautic instruments. M. D. Hersey. (1923)
Tech. Report 198	Astronomical methods in aerial navigation. K. H. Beim. (1925) 15¢.

AIRCRAFT INSTRUMENTS (Cont.)

Published by National Advisory Committee for Aeronautics
(Washington, D. C.): (Cont.)

- Tech. Report 206 Non-metallic diaphragms for instruments. H. N. Eaton and C. T. Buckingham. (1925) 10¢.
- Tech. Report 246* Tables for calibrating altimeters and computing altitudes based on the standard atmosphere. W. G. Brombacher. (1926)
- Tech. Report 299 Investigation of damping liquids for aircraft instruments. G. H. Keulegan. (1928) 10¢.
- Tech. Report 310 Pressure element of constant logarithmic stiffness for temperature compensated altimeter. W. G. Brombacher and F. Cordero. (1929) 10¢.
- Tech. Report 358 Temperature coefficient of the modulus of rigidity of aircraft instrument diaphragm and spring materials. W. G. Brombacher and E. R. Milton. (1930) (In Press)

Published by other parties:

- Aeronautic instruments. M. D. Horsey. Trans., American Society of Mechanical Engineers (29 W. 39th St., New York, N. Y.), Vol. 42, p. 83; 1920.
- The earth inductor compass. P. R. Heyl and L. J. Briggs. Proc., American Philosophical Society (104 S. Fifth St., Philadelphia, Pa.), Vol. 51, p. 15; 1922.
- Determination of the altitude of aircraft. W. G. Brombacher. Journal of Optical Society of America (care of Cornell University, Ithaca, N. Y.), Vol. 7, p. 719; 1923.
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