

MARCH 29, 1935

PUBLICATIONS ON GAGES (DIMENSIONAL)

GENERAL INFORMATION

This Letter Circular is a list of publications on gages (dimensional) and the related subjects of tolerances, metal fits, and contact length measurements, by members of the staff of the National Bureau of Standards. Some of these were printed in the regular series of publications of the Bureau, some in the various scientific and technical journals, and others were mimeographed. Copies of printed publications can usually be consulted at the leading libraries of the larger cities.

For ready reference and convenience in ordering the separate papers of the Bureau, these have been listed with the serial letter and number in one column, and the price in the second column. Where no price is noted, the separate paper is no longer obtainable, but may be consulted in libraries as stated in the first paragraph. Superseded publications are indicated by a citation to the current publication. A complete list of our publications (Circular No. 24 and Supplement) is also generally available at such libraries.

Where the price is noted, the publication may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. Gratis mimeographed publications may be obtained by request from the National Bureau of Standards. The prices quoted are for delivery to addresses in the United States and its possessions, and to Canada, Cuba, Mexico, Newfoundland, and the Republic of Panama. When remitting for delivery to other countries than those, include in your remittance one-third of the total cost of publications to cover postage. Remittances should be made payable to the "Superintendent of Documents, Government Printing Office, Washington D. C." and sent to him with the order. Stamps are not accepted.

Serial letters are used to designate printed Bureau publications as follows:

RP = "Research Paper". These are reprints of articles appearing in the "Bureau of Standards Journal of Research" (BSJ. Research) and the "Journal of Research of the National Bureau of Standards" (J. Research NBS), the latter being the title of this periodical since July 1934 (volume 13, number 1).

S = "Scientific Paper" of the National Bureau of Standards. From nos. 1 to 329, inclusive, the separate papers of this series were known as reprints from the "Bulletin of the Bureau of Standards" (Bul.BS). Subsequently, from nos. 330 to 572, the separates were known as reprints from the "Scientific Papers of the Bureau of Standards" (Sci.Pap.BS). This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

T = "Technologic Paper" of the National Bureau of Standards. Nos. 1 to 202 were issued each independent of the other with individual pagination. Later they were assembled to make the first 15 volumes of this series, and subsequent separates were given volume pagination. (Tech.Pap.BS). This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

C = "Circular" of the National Bureau of Standards.

M = "Miscellaneous Publication" of the National Bureau of Standards.

CS = "Commercial Standard" of the National Bureau of Standards.

FS = "Federal Specification" of the Federal Standard Stock Catalogue.

Mimeographed publications listed herein are designated by the following symbols:

LC = "Letter Circular" of the National Bureau of Standards.

NSTC = "Communication" of the National Screw Thread Commission. The list given has been selected as containing information relative to gages which is not otherwise available.

For papers in other scientific or technical journals, the name of the journal or of the organization publishing the article is given in abbreviated form, with address in parentheses, together with the volume number (underscored), page, and year of publication in the order named. The Bureau can not supply copies of these journals, or reprints from them, and it is unable to furnish information as to their availability or price.

LIST OF PUBLICATIONS

RP 272	.10	Gardner, I.C. and Case, F.A., An optical coincidence gage. BS J. Research, <u>6</u> , 229-237 (1931)
RP 276	.10	Herschman, H. K., The resistance of chromium-plated plug gages to wear, BS J. Research, <u>6</u> , 295-304 (1931)
RP 528	.05	Moon, Charles, Apparatus for comparison of length gages, BS J. Research, <u>10</u> , 249-255 (1933)
RP 549	.05	Holt, W.L., Screw micrometer gages for rubber specimens, BS J. Research, <u>10</u> , 575-582 (1933)
S 436	.10	Peters, C.G. and Boyd, H.S., Interference methods for standardizing and testing precision gage blocks (1922)
S 513	.20	Scott, Howard, Origin of Quenching Cracks (1925)
S 535	.05	Bearce, H.W., A fundamental basis for measurements of length (1926)
T 226	.10	Houston, Paul L., and Miller, D.R., A study of commercial dial micrometers for measuring the thickness of paper (1922)
T 344	.10	Fullmer, Irvin H., Comparison of American, British, and German standards for metal fits (1927)
C 18		Standard gage for sheet and plate iron and steel (1911). See C 391.
C 31		<i>Copper wire tables (1914)</i> .
C 67	.05	Wire gages (1918)
C 391	.10	Standard thicknesses, weights, and tolerances of sheet metal (customary practice) (1931)
M 42		Progress Report of the National Screw Thread Commission (1921). See M 141.
M 49	.05	Bearce, H.W., Graphic comparison of (English and metric) screw thread pitches (1922)
M 61		Report of the National Screw Thread Commission (revised 1924). See M 141.
M 89		Report of the National Screw Thread Commission (revised 1928). See M 141.

M 98	.10	American National screw thread tables for shop use, I. standard threads (coarse and fine thread series) (1929). See M 141.
M 99	.10	American National screw thread tables for shop use, II special threads (1929). See M 141.
M 100	.15	Plain and thread plug and ring gage blanks (1930). See CS 8-33
M 109	.05	Fullmer, I.H., Chart for determining the helix angles of screw threads (1930).
M 129	.50	Fullmer, I.H., Gages and gaging. Report of the Twenty-fourth National Conference on Weights and Measures, 125-129 (1931).
M 141	.15	Report of the National Screw Thread Commission (revised 1933)
CS 8-33	.10	Gage blanks, second edition (1933)
CS 21-34	.05	Interchangeable ground-glass joints, stopcocks, and stoppers, second edition (1934)
CS 24-30	.10	American National standard screw threads (coarse and fine thread series) (1930) See M 141.
CS 25-30	.15	American National special screw threads (1930). See M 141.
FS GGG-G-61	.10	Gages; plug and ring, plain and thread (1932)
FS GGG-P-351	.05	Pipe-threads; standard (1934)
LC 13	gratis	Inspection of taper thread gages (1923)
LC 18	gratis	Important European screw thread systems and dimensions of bolt and screw heads and nuts (1923)
LC 20	gratis	The measurement of radii on profile gages (1919)
LC 22	gratis	The measurement of plain taper gages (1919)
LC 372	gratis	The use of flexible steel gages in gaging the mesh of gill nets (1933)
NSTC 62	gratis	Stud fits (Summary of commercial practice) (1923). See M 141

- NSTC 118 gratis Instrument and watch screws and screw threads (1927)
- NSTC 143 gratis Methods and devices for measuring odd-fluted taps (1929)

Fischer, Louis, A., Length Standards and Measurements, Jour. Washington Acad. Sci. (450 Ahnash St., Menasha, Wis.), 5, 145-159 (1915)

Gage for measuring thickness of strips. Am. Mach. (McGraw-Hill Pub. Co., Inc., 330 W. 42nd St., New York, N.Y.), 49, 717, (1918)

Briggs, C.A., Chapin, W.C., and Heil, H.G., The elastic indentation of steel balls under pressure. Trans. Am. Soc. Mech. Engrs. (29 West 39th St., New York, N.Y.), 40, No. 1643, 139-148 (1918)

Van Keuren, H. L., The measurement of thread gages. Trans. Am. Soc. Mech. Engrs. (29 West 39th St., New York, N.Y.), 40, No. 1667, 827-849 (1918)

Stratton, S. W., Government action on recommendations of Committee on Standardization of Gages, Mech. Eng. (A.S.M.E., 29 W. 39th St., New York, N.Y.), 41, 185-186 (1919).

Van Keuren, H.L., The manufacture of Hoke Precision gages at the Bureau of Standards, Am. Mach. (McGraw-Hill Pub. Co., Inc., 330 W. 42nd St., New York, N.Y.), 50, 625-630 (1919)

Van Keuren, H.L., Certification of gages at the Bureau of Standards, Mech. Eng. (A.S.M.E., 29 W. 39th St., New York, N.Y.), 41, 800-902 (1919)

Van Keuren, H.L., and Fullmer, I.H., Improved design of "not go" thread gage, Machinery (N.Y.) (The Industrial Press, 140-148 Lafayette St., New York, N.Y.), 25, 1076-1077 (1919).

The American Precision Block. Sci. Am. (Munn and Co., Inc., 24 W. 40th St., New York, N.Y.), 120, 658-668 (1919)

A millionth of an inch, - how the wave-length of light is used to detect errors of this infinitesimal amount. Sci. Am. (Munn and Co., Inc., 24 W. 40th St., New York, N.Y.), 121, 62-63 (1919)

Conaty, A. L., An exact method of setting dividers. Machinery (N.Y.), (The Industrial Press, 140-148 Lafayette St., New York, N.Y.), 25, 859 (1919)

Rankin, R.L., Measurement of plain rings. Am. Mach. (McGraw-Hill Pub. Co., 330 W. 42nd St., New York, N.Y.), 50, 1137-1138 (1919).

Rankin, R.L., Flatness tests at Bureau of Standards. Am. Mach. 50, 1218-1220 (1919)

Rankin, R.L., Use of microscopes in the Gage Section, Bureau of Standards. Am. Mach., 51, 581-582 (1919)

Rankin, R.L., Use of precision balls for accurate measurements. Machinery (N.Y.), 26, 236-238 (1919); Machinery (Lond.) (Machinery Pub. Co., Ltd., 52-54 High Holborn, London, W.C.1), 15, 272-274 (1919)

Rankin, R.L., Types of end standards. Iron Age (Clifton Co., Inc., Chestnut and 56th Sts., Philadelphia, Pa.), 104, 1331-1332 (1919)

Peters, C. G., and Boyd, H.S., The calibration and dimensional changes of precision gage blocks, Am. Mach. (McGraw-Hill Pub. Co., Inc., 330 W. 42nd St., New York, N.Y.), 53, 627-632, 674-679 (1920).

Souder, W., Profile-curvature gage. Am. Mach. (McGraw-Hill Pub. Co., 330 W. 42nd St., New York, N.Y.), 53, 732 (1920)

Peters, C.G., and Boyd, H.S., Testing plane surfaces by interferometer. Opt. Soc. of Am. Jour. (Am. Inst. of Physics, 11 E. 38th St., New York, N.Y.), 4, 407-419 (1920)

Fischer, Louis A., Improved type of optical projection apparatus. Am. Mach., 53, 1158 (1920)

Artificial seasoning of gage steels. Sci. Am. Monthly (Munn and Co., Inc., 24 W. 40th St., New York, N.Y.), 3, 80 (1921)

New lantern for screw testing. Sci. Am. (Munn and Co., Inc., 24 W. 40th St., New York, N.Y.), 124, 94 (1921)

French, H.J. Artificial seasoning of steels. Chem. and Met. Eng. (McGraw-Hill Pub. Co., 330 W. 42nd St., New York, N.Y.), 25, 155-158 (1921); Am. Mach., 55, 768-771 (1921)

Investigation of steel for precision gages. Chem. and Met. Eng. (McGraw-Hill Pub. Co., 330 W. 42nd St., New York, N.Y.), 27, 754 (1922).

Burgess, G.K., Precision measuring instruments used in gage inspection, Army Ordnance (Army Ordnance Assn., Mills Bldg., Washington, D.C.), 4, 375-380 (1924).

Scott, Howard, Quenching Properties of Glycerine and Its Water Solutions. Trans. Am. Soc. Steel Treating (Am. Soc. for Metals, 7016 Euclid Ave., Cleveland, Ohio), 6, 13-32 (1924).

Moon, Charles, An electrically controlled micrometer caliper, J. Opt. Soc. Am. and Rev. Sci. Inst. (Am. Inst. of Physics, 11 E. 38th St., New York, N.Y.), 11, 453-458 (1925)

Bearce, H.W., Unilateral and bilateral tolerances as applied to interchangeable manufacture, Mech. Eng. (A.S.M.E., 29 W. 39th St., New York, N.Y.), 47, 485-487 (1925)

Scott, Howard, Dimensional changes accompanying the phenomena of tempering and aging tool steels. Trans. Am. Soc. for Steel Treating (Am. Soc. for Metals, 7016 Euclid Ave., Cleveland, Ohio), 9, 277-304 (1926).

French, H.J., and Herschman, H.K., Wear of steels with particular reference to plug gages, Trans. Am. Soc. Steel Treating (Am. Soc. for Metals, 7016 Euclid Ave., Cleveland, Ohio), 10, 683-717, 813 (1926)

French, H.J., and Herschman, H.K., Recent experiments relating to the wear of plug gages, Trans. Am. Soc. Steel Treating (Am. Soc. for Metals, 7016 Euclid Ave., Cleveland, O.), 12, 921-953 (1927). Also Summary in Am. Mach., 67, 462 (1927)

Measuring thread angle of taper thread ring gages, Nat. Bur. Stds. Technical News Bulletin, No. 125, p. 2 (Sept. 1927)

Blum, Wm., Chromium plating, Mech. Eng. (A.S.M.E., 29 W. 39th St., New York, N.Y.), 42, 33-35 (1927)

Bearce, H.W., Recheck of regional master cable drilling tool joint gages. A.P.I. Standardization Bulletin (American Petroleum Institute, 50 W. 50th St., New York, N.Y.) No. 102, 52-53 (1928)

Blum, W., Mechanical applications of chromium plating, Mech. Eng. (A.S.M.E., 29 W. 39th St., New York, N.Y.), 50, 927-930 (1928); Iron Trade Rev., 83, 1434-1436 (1928); Iron Age, 122, 1504-1505 (1928); Am. Mach., 69, 921-922 (1928)

Burgess, George K., Precision machines and instruments for the measurement of length, Proc. World Eng. Congress, Tokyo, 5, No. 335, 1-78 (1929)

Measurement of A.P.I. grand and regional master cable tool joint gages made in 1930 by the U. S. Bureau of Standards, Washington, D. C., A.P.I. Standardization Bulletin (Am. Pet. Inst., 50 W. 50th St., New York, N.Y.), No. 105, 13-18 (1931)

Bearce, H.W., Definition of the Inch. Mech. Eng. (A.S.M.E., 29 W. 39th St., New York, N. Y.), 54, 689-691 (1932)

Bearce, H. W., Screw thread revisions proposed, Am. Mach. (McGraw-Hill Pub. Co., 330 W. 42nd St., New York, N.Y.), 76, 933-935 (1932)

Bearce, H. W., Limit systems promote rapid production and assembly, ASA Bulletin (Am. Stds. Assn., 29 W. 39th St., New York, N.Y.), No. 68, 3-5. Also Abrasive Industry (Penton Pub. Co., Penton Bldg., Cleveland, O.), 13, 11-12 (1932)

Bearce, H.W., Common Defect in Screw Threads, Am. Mach. (McGraw-Hill Pub. Co., Inc., 330 W. 42nd St., New York, N.Y.), 77, 148 (1933)

American standard practice for inch-millimeter conversion for industrial use, ASA B48.1-1933 (American Standards Association, 29 West 39th St., New York, N.Y., price 20 cents)

Miller, D.R., Should American industry adopt ISA fits?, Am. Mach. (McGraw-Hill Pub. Co., Inc., 330 W. 42nd St., New York, N.Y.), 78, 536-538 (1934)

Miller, D.R., Entrance of "no go" thread gages by 2 1/2 turns, A.P.I. Production Bulletin (Am. Pet. Inst., 50 W. 50th St., New York, N.Y.), No. 213, 176-177 (1934)