

(Supersedes
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G A S E S

Publications by the Staff of the National Bureau of Standards.

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Under each of the above classifications, the papers are grouped in the following order: Research Papers, Scientific Papers, Technologic Papers, Circulars, Miscellaneous Publications, Publications in Other Journals.

GENERAL INFORMATION

This Letter Circular is a selected list of papers relating to gases. Some of these have been published in the regular series of publications of the Bureau and others in various scientific and technical journals.

Unless specifically stated, the papers herein listed are not obtainable from the National Bureau of Standards. Those marked "OP" are out of print, but, in general, may be consulted at the libraries in large cities.

Where the price of a publication is given, it can be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. The prices quoted are for delivery to addresses in the United States and its territories and possessions and in Canada, Colombia, Cuba, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Newfoundland, the Republic of Panama, and Venezuela. When remitting for delivery to other countries, one-third of the total cost of publications should be added to cover postage.

Remittances should be made payable to the Superintendent of Documents, Government Printing Office, Washington, D. C. and sent to him with order. (Stamps not accepted.)

Serial letters are used to designate publications of the National Bureau of Standards.

- RP = "Research Paper". These are reprints of articles appearing in the "Bureau of Standards Journal of Research" (BS J. 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. This series was superseded by the "Journal of Research" in 1928.
- T = "Technologic Paper" of the National Bureau of Standards. T1 to T202 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. Papers BS). This series has also been superseded by the Journal of Research.
- C = "Circular" of the National Bureau of Standards.
- M = "Miscellaneous Publication" of the National Bureau of Standards.

For papers in other scientific or technical journals, the name of the journal is given in abbreviated form, with address in parentheses, and with the volume number, page, and year of publication, in the order named. Where indicated, reprints of the published articles are available from the National Bureau of Standards. Otherwise, the journals may be obtained from the publisher or consulted in libraries.

I. CHEMICAL AND PHYSICAL PROPERTIES OF GASES
(Apparatus, Methods, Measurement and
Theoretical Considerations)

For calorimetry and subjects dealing with utilization of fuel gases, see "Utilization of Fuel Gases". See also "Gas Analysis" and "Permeability".

| <u>Series</u> | <u>Price</u> | <u>Title</u> |
|------------------------|--------------|--|
| <u>Research Papers</u> | | |
| RP111 | 10¢ | Heat of formation of sulphur dioxide. J.P.Eckman and F.D.Rossini. BS J. Research <u>3</u> , 597 (1929). |
| RP260 | 5¢ | Heats of combustion of methane and carbon monoxide. F.D.Rossini. BS J. Research <u>6</u> , 37 (1931). |
| RP343 | 5¢ | Heat of formation of water and heats of combustion of methane and carbon monoxide: A correction. F. D. Rossini. BS J. Research <u>7</u> , 329 (1931). |
| RP487 | 5¢ | Calorimetric method for determining intrinsic energy of gas as a function of pressure. E.W.Washburn. BS J. Research <u>9</u> , 521 (1932). |
| RP499 | 5¢ | Heat of formation of hydrogen chloride and some related thermodynamic data. F. D. Rossini. BS J. Research <u>9</u> , 679 (1932). |
| RP503 | 5¢ | Calorimetric determination of intrinsic energy of gases as a function of pressure. F. D. Rossini. BS J. Research <u>9</u> , 733 (1932). |
| RP523 | 10¢ | Pressure of saturated water vapor in range 100° to 374°C. N. S. Osborne, H. F. Stimson, E.F. Flock, and D. C. Ginnings. BS J. Research <u>10</u> , 155 (1933). |
| RP538 | 5¢ | The vapor pressure of liquid and solid carbon dioxide. C. H. Meyers and M. S. Van Dusen. BS J. Research <u>10</u> , 381 (1933). |
| RP616 | 5¢ | Formula for specific volumes of saturated vapors. C. H. Meyers. BS J. Research <u>11</u> , 691 (1933). |
| RP 643 | 5¢ | A critical test for the purity of gases. Martin Shepherd. BS J. Research <u>12</u> , 184 (1934). |
| RP686 | 5¢ | Calorimetric determination of the heats of combustion of ethane, propane, normal butane, and normal pentane. F. D. Rossini. BS J. Research <u>12</u> , 735 (1934). |

| <u>Series</u> | <u>Price</u> | <u>Title</u> |
|---------------|--------------|--|
| RP691 | 5¢ | A formula and tables for the pressure of saturated water vapor in the range 0 to 374°C. N. S. Osborne and C. H. Meyers. J. Research NBS <u>13</u> , 1 (1934). |
| RP692 | 5¢ | Heats of combustion and of formation of the normal paraffin hydrocarbons in the gaseous state, and the energies of their atomic linkages. F. D. Rossini. J. Research NBS <u>13</u> , 21 (1934). |
| RP729 | 5¢ | Fractionation of the isotopes of hydrogen and of oxygen in a commercial electrolyzer. E. W. Washburn, E. R. Smith and F. A. Smith. J. Research NBS <u>13</u> , 599 (1934). |
| RP820 | 5¢ | Fractionation of the isotopes of oxygen in a commercial electrolyzer - a correction. E. R. Smith and M. Wojciechowski. J. Research NBS <u>15</u> , 187 (1935). |
| RP833 | 5¢ | Heat of combustion of isobutane. F. D. Rossini. J. Research NBS <u>15</u> , 357 (1935). |
| RP841 | 5¢ | The difference in vapor pressures of ortho- and paradeuterium. F. G. Brickwedde, R. B. Scott, and H. S. Taylor. J. Research NBS <u>15</u> , 463 (1935). |
| RP915 | 5¢ | Empirical relation between the atomic dimensions and the melting and sublimation points of the noble gases, halogens, and elements of the sulphur group. D. H. Brauns. J. Research NBS <u>17</u> , 337 (1936). |
| RP932 | 5¢ | Difference in atomic weight of oxygen from air and from water. E. R. Smith and H. Matheson. J. Research NBS <u>17</u> , 625 (1936). |
| RP933 | 5¢ | Heat of hydrogenation of ethylene. F. D. Rossini. J. Research NBS <u>17</u> , 629 (1936). |
| RP983 | 10¢ | Calorimetric determination of the thermodynamic properties of saturated water in both the liquid and gaseous states from 100 to 374°C. N. S. Osborne, H. F. Stimson, and D. C. Ginnings. J. Research NBS <u>18</u> , 389 (1937). |
| RP1023 | 5¢ | Molecular volumes and expansivities of liquid normal hydrogen and parahydrogen. R. B. Scott and F. G. Brickwedde. J. Research NBS <u>19</u> , 237 (1937). |

| <u>Series</u> | <u>Price</u> | <u>Title</u> |
|---------------|--------------|---|
| RP1024 | 5¢ | Calorimetric determination of the heats of combustion of ethylene and propylene. F. D. Rossini and J. W. Knowlton. J. Research NBS <u>19</u> , 240 (1937) |
| RP1028 | 5¢ | Heats of combustion and of formation of the normal olefin (alkene-1) hydrocarbons in the gaseous state. F. D. Rossini and J. W. Knowlton. J. Research <u>19</u> , 339 (1937). |
| RP1050 | 5¢ | Method and apparatus for the rapid conversion of deuterium oxide into deuterium. J. W. Knowlton and F. D. Rossini. J. Research NBS <u>19</u> , 605 (1937). |
| RP1141 | 5¢ | Heat and free energy of formation of carbon dioxide and of the transition between graphite and diamond. F. D. Rossini and R. S. Jessup. J. Research NBS <u>21</u> , 491 (1938). |
| RP1182 | 5¢ | Preparation of oxygen of high purity. Martin Shepherd, E. R. Weaver, and S. F. Pickering. J. Research NBS <u>22</u> 301 (1939) |

Scientific Papers

| | | |
|------|-----|---|
| S57 | 15¢ | On the establishment of the thermodynamic scale of temperature by means of the constant-pressure gas thermometer. E. Buckingham. Bul. BS <u>3</u> , 237 (1907). |
| S77 | OP | The atomic weight of hydrogen. W. A. Noyes. Bul. BS <u>4</u> , 179 (1907). |
| S81 | OP | The atomic weight of chlorine. W. A. Noyes and H.C.P. Weber. Bul. BS <u>4</u> , 345 (1907). |
| S123 | OP | The theory of the Hamoson liquefier. E. Buckingham. Bul. BS <u>6</u> , 125 (1909). |
| S136 | OP | On the definition of the ideal gas. E. Buckingham. Bul. BS <u>6</u> , 409 (1909). |
| S315 | 10¢ | The latent heat of vaporization of ammonia. N. S. Osborne and M. S. Van Dusen. Bul. BS <u>14</u> , 439 (1918). |

| <u>Series</u> | <u>Price</u> | <u>Title</u> |
|---------------|--------------|---|
| S327 | 10¢ | Measurements on the index of refraction of air for wave lengths from 2218 A to 9000 A. W. F. Meggers and C. G. Peters. Bul. BS <u>14</u> , 697 (1919). |
| S359 | OP | Efflux of gases through small orifices. Edgar Buckingham and J. D. Edwards. Sci. Pap. BS <u>15</u> , 573 (1920). |
| S369 | 10¢ | Vapor pressure of ammonia. C. S. Cragoe, C. H. Meyer and C. S. Taylor. Sci. Pap. BS <u>16</u> , 1 (1920). |
| S465 | OP | Composition, purification, and certain constants of ammonia. E. C. McKelvy and C. S. Taylor. Sci. Pap. <u>18</u> , 655 (1923). |
| S467 | OP | Specific volume of saturated ammonia vapor. C. S. Cragoe, E. C. McKelvy and G. F. O'Connor. Sci. Pap. <u>18</u> , 707 (1923). |
| S501 | 15¢ | Specific heat of superheated ammonia vapor. N. S. Osborne, H. F. Stimson, T. S. Sligh, Jr. and C. S. Cragoe. Sci. Pap. <u>20</u> , 65 (1924). |
| S503 | 20¢ | A flow calorimeter for specific heats of gases. N. S. Osborne, H. F. Stimson, and T. S. Sligh, Jr. Sci. Pap. <u>20</u> , 119 (1924). |
| S529 | 15¢ | A review of the literature relating to the normal densities of various gases. Marion Smith Blanchard and S. F. Pickering. Sci. Pap. <u>21</u> , 141 (1925). |
| S541 | 15¢ | A review of the literature relating to the critical constants of various gases. S. F. Pickering. Sci. Pap. <u>21</u> , 597 (1926). |

Technologic Papers

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|-----|----|--|
| T89 | OP | A specific gravity balance for gases. J. D. Edwards. Tech. Pap. BS T89 (1917). |
| T94 | OP | Effusion method of determining gas density. J. D. Edwards. Tech. Pap. BS T94 (1917). |

Circulars

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|------|-----|--|
| C81 | 10¢ | Bibliography of scientific literature relating to helium. Cir. BS C81 (1919). |
| C279 | 25¢ | Relations between the temperatures, pressures and densities of various gases. Cir. BS C279 (1926). |

Publications in Other Journals

(The following are not Government publications and cannot be obtained from the Superintendent of Documents.)

- Determination of gas density. J. D. Edwards. J. Ind. Eng. Chem. (706 Mills Bldg. Washington, D. C.) 9, 790 (1917).
- Ferrosilicon process for the generation of hydrogen. E. R. Weaver. Report No. 40. Fourth annual report of the National Advisory Committee for Aeronautics, 1918. (Available from National Bureau of Standards.)
- Preparation and testing of hydrogen of high purity. J. D. Edwards. J. Ind. Eng. Chem. 11, 961 (1919).
- Inflammability of jets of hydrogen and inert gas. P. G. Ledig. J. Ind. Eng. Chem. 12, 1098 (1920).
- An airship slide rule. E. R. Weaver and S. F. Pickering. Report No. 160. Ninth annual report of National Advisory Committee for Aeronautics. (1923).
- Production of hydrogen by the thermal decomposition of oil. E. R. Weaver. Chem. Met. Eng. 28, 764, 939, 1072 (1923).
- Description of new type of gas density balance. S. F. Pickering. Oil and Gas J. 28, Dec. 26, 1929.
- The composition of the atmosphere at approximately 21.5 kilometers. Martin Shepherd. The National Geog. Soc. - U.S. Army Air Corps Stratosphere Flight of 1935 in the Balloon "Explorer II". (Natl. Geo. Soc., Washington, D. C.) Stratosphere Series No. 2.

II. GAS ANALYSIS

| <u>Series</u> | <u>Price</u> | <u>Title</u> |
|---------------|--------------|---|
| | | <u>Research Papers</u> |
| RP25 | 5¢ | A study of hydrogen-antimony-tin method for determination of oxygen in cast irons. Bengt Kjerman and Louis Jordan. BS J. Research <u>1</u> , 701 (1928). |
| RP75 | 10¢ | The accurate determination of the gasoline content of natural gas and the analytical separation of natural gases by isothermal fractional distillation. Martin Shepherd. BS J. Research <u>2</u> , 1145 (1929). |
| RP130 | 5¢ | A simple control stopcock for gas analysis apparatus. Martin Shepherd. BS J. Research <u>4</u> , 23 (1930). |
| RP177 | 5¢ | A gas analysis pipette for difficult absorptions. Martin Shepherd. BS J. Research <u>4</u> , 747 (1930). |
| RP266 | 15¢ | An improved apparatus and method for the analysis of gas mixtures by combustion and absorption. Martin Shepherd. BS J. Research <u>6</u> , 121 (1931). |
| RP346 | 10¢ | Determination of oxygen and nitrogen in irons and steels by vacuum fusion methods. H. C. Vacher and L. Jordan. BS J. Research <u>7</u> , 375 (1931). |
| RP420 | 5¢ | Gases obtained from commercial feldspars heated in vacuo. G. R. Shelton and H. H. Holscher. BS J. Research <u>8</u> , 347 (1932). |
| RP494 | 5¢ | Nitrogen content of some standard-sample steels. J. G. Thompson and E. H. Hamilton. BS J. Research <u>9</u> , 593 (1932). |
| RP625 | 5¢ | Critical study of the determination of ethane by combustion over platinum in the presence of excess oxygen. Martin Shepherd and Joseph R. Branham. BS J. Research <u>11</u> , 783 (1933). |
| RP661 | 5¢ | Errors in gas analysis arising from loss of gas by solution in rubber connections and stopcock lubricant. J. R. Branham. BS J. Research <u>12</u> , 353 (1934). |
| RP680 | 5¢ | Significant vapor pressure considerations of the Van Slyke manometric method of gas analysis. Martin Shepherd. BS J. Research <u>12</u> , 551 (1934). |
| RP715 | 5¢ | Critical study of the determination of ethane by explosion with oxygen or air. J. R. Branham and Martin Shepherd. BS J. Research <u>13</u> , 377 (1934). |

| <u>Series</u> | <u>Price</u> | <u>Title</u> |
|---------------|--------------|---|
| RP962 | 5¢ | Saturation by water in gas analysis compensators. J. R. Branham, J. Research NBS <u>18</u> , 59 (1937). |
| RP976 | 10¢ | Cooperative study of methods for the determination of oxygen in steel. J. G. Thompson, H. C. Vacher and H. A. Bright. J. Research NBS <u>18</u> , 259 (1937). |
| RP1014 | 5¢ | Gases in some optical and other glasses. C. Hahner, G. Q. Voigt and A. M. Finn. J. Research NBS <u>19</u> , 95 (1937). |
| RP1112 | 5¢ | Preparation and application of chromous solutions for the absorption of oxygen in volumetric gas analysis. J. R. Branham. J. Research NBS <u>21</u> , 45 (1938). |
| RP1113 | 5¢ | Displacement of nitrogen from and its solution in certain reagents during volumetric gas analysis. J. R. Branham and Max Sucher. J. Research NBS <u>21</u> , 63 (1938). |
| RP1114 | 5¢ | Hydrogen-reduction method for the determination of oxygen in steel. J. G. Thompson and V. C. F. Holm. J. Research NBS <u>21</u> , 79 (1938). |
| RP1115 | 10¢ | Determination of oxygen in alloy steels. J. G. Thompson and V. C. F. Holm. J. Research NBS <u>21</u> , 87 (1938). |
| RP1175 | 10¢ | Gasometric method and apparatus for the analysis of mixtures of ethylene oxide and carbon dioxide. J. R. Branham and Martin Shepherd. J. Research NBS <u>22</u> , 171 (1939). |

Scientific Papers

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|------|-----|--|
| S267 | 15¢ | Colorimetric determination of acetylene and its application to the determination of water. E. R. Weaver. Bul. BS <u>13</u> , 27 (1916). |
| S316 | 5¢ | Gas interferometer calibration. J. D. Edwards. Bul. BS <u>14</u> , 473 (1918). |
| S334 | OP | New forms of instruments for showing the presence and amount of combustible gas in the air. E. R. Weaver and E. E. Weibel. Sci. Pap. BS <u>15</u> , 47 (1919). |
| S350 | OP | Equilibrium conditions in the system carbon, iron oxide, and hydrogen in relation to the Ledebur method for determining oxygen in steel. J. R. Cain and L. Adler. Sci. Pap. BS <u>15</u> , 353 (1919). |

| <u>Series</u> | <u>Price</u> | <u>Title</u> |
|---------------|--------------|---|
| S554 | 5¢ | Determination of sulphur trioxide in presence of sulphur dioxide, together with some analyses of commercial liquid sulphur dioxide. J.R. Eckman. Sci. Pap. BS <u>22</u> , 277 (1927). |
| S555 | 5¢ | A weight burette for the micromasurement of liquid volumes. Martin Shepherd. Sci. Pap. BS <u>22</u> , 287 (1927). |
| S559 | 5¢ | A burette for the accurate measurement of gas volumes without gas connection to a compensator. E. R. Weaver and Martin Shepherd. Sci. Pap. BS <u>22</u> , 375 (1927). |

Technologic Papers.

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|------|----|--|
| T20 | OP | Determination of sulphur in illuminating gas. R. S. McBride and E. R. Weaver. Tech. Pap. BS T20 (1913). |
| T34 | OP | The determination of ammonia in illuminating gas. J. D. Edwards. Tech. Pap. BS T34 (1914). |
| T41 | OP | Lead acetate test for hydrogen sulphide in gas. J. D. Edwards. Tech. Pap. BS T41 (1914). |
| T126 | OP | A study of the Goutal method for determining carbon monoxide and carbon dioxide in steels. J. R. Cain and E. Pettijohn. Tech. Pap. BS T126 (1919). |
| T131 | 5¢ | Application of the interferometer to gas analysis. J. D. Edwards. Tech. Pap. BS T131 (1919). |
| T242 | 5¢ | Detector for water vapor in closed pipes. E. R. Weaver and P. G. Ledig. Tech. Pap. BS <u>17</u> , 637 (1923). |
| T249 | OP | Thermal-conductivity method for the analysis of gases. P. E. Palmer and E. R. Weaver. Tech. Pap. BS <u>18</u> , 35 (1924). |

Publications in Other Journals

(The following are not Government publications and can not be obtained from the Superintendent of Documents.)

- A qualitative test for water by the use of the acetylene-cuprous chloride reaction. E. R. Weaver. J. Am. Chem. Soc. (Mills Bldg., Washington, D. C.) 36 (2) 2462 (1914).
- Gas washing apparatus with enclosed filter. E. R. Weaver and J. D. Edwards. J. Ind. Eng. Chem./7, 534 (1915).
(Mills Bldgs., Washington, D.C.)
- Testing of balloon gas. J. D. Edwards. Report No. 41. Fourth Annual Report of Nat'l. Advisory Comm. for Aeronautics. 1918.
- A weight buret for gas analysis. E. R. Weaver and P. G. Ledig. J. Am. Chem. Soc. 42, 1177 (1920).
- New forms of combustion apparatus for use in gas analysis. R. R. Weaver and P. G. Ledig. J. Ind. Eng. Chem. 12, 368 (1920).
- Gas purity recorder for electrolytic oxygen and hydrogen. P. E. Palmer and C. P. Larrabee. Bulletin of Compressed Gas Manufacturers' Association (11 W. 42nd St., New York, N. Y.) (1921).
- Absorption of carbon dioxide and ammonia from gas bubbles. P. G. Ledig. Ind. and Eng. Chem. 16, 1231 (1924).
- Method for studying the rapid absorption of gases by liquids. P. G. Ledig and E. R. Weaver. J. Am. Chem. Soc. 46, 650 (1924).
- An adaptation of the thermal conductivity method to the analysis of respiratory gases. P. G. Ledig and R. S. Lyman. J. Clinical Investigation 4, 495 (1927).
- Rubber stopcock lubricants for high vacuum and other uses. Martin Shepherd and P. G. Ledig. Ind. Eng. Chem. 19, 1059 (1927).
- An automatic sample collecting vacuum pump. E. R. Weaver and Martin Shepherd. Am. Chem. Soc. 50, 1829 (1928).
- Iodine-pentoxide method for analyzing products of combustion for small quantities of carbon monoxide. Gas Chemists Handbook (American Gas Association, 420 Lexington Ave., New York, N. Y.) 3d Ed. p. 289 (1929).
- Application of the thermal-conductivity method of gas analysis to the study of gas appliances. Gas Chemists Handbook 3d Ed. p. 297 (1929).

Common errors of gas analysis and their remedies. Martin Shepherd. Am. Gas J. (53 Park Pl. New York, N. Y.) 134, 49 and 67 (1931).

Calculating gas heating value from analysis. J. R. Branham. Am. Gas J. 135, 42 (1931).

Device for removing "frozen" plugs from stopcocks. Harry W. Bailey. Ind. Eng. Chem. Anal. Ed. 4, 324 (1932).

III. UTILIZATION OF FUEL GASES - GAS APPLIANCES - FLAME STUDIES

Series Price

Title

Research Papers

- RP84 5¢ Bunsen flames of unusual structure. F. A. Smith and S. F. Pickering. BS J. Research 3, 65 (1929).
- RP446 OP A method for determining the most favorable design of gas burners. BS J. Research 8, 669 (1932). J. H. Eiseman, E. R. Weaver and F. A. Smith.
- RP553 5¢ The effect of altitude on limits of safe operation of gas appliances. J. H. Eiseman, F. A. Smith and C. J. Merritt. BS J. Research 10, 619 (1933).
- RP900 5¢ Measurement of flame velocity by a modified burner method. Francis A. Smith and S. F. Pickering. J. Research NBS 17, 7 (1936).
- RP988 10¢ Effect of the depth of drilled ports on the limits of operation of domestic gas burners. John H. Eiseman and Francis A. Smith. J. Research NBS 18, 485 (1937).

Technologic Papers

- T14 OP Legal specifications for illuminating gas. E. B. Rosa and R. S. McBride. Tech. Pap. BS T14 (1913).
- T36 OP Industrial gas calorimetry. C. W. Waidner and E. F. Mueller. Tech. Pap. BS T36 (1914).
- T99 OP Gas mantle lighting conditions in ten large cities in the United States. R. S. McBride and C. E. Reinicker. Tech. Pap. BS T99 (1917).

| <u>Series</u> | <u>Price</u> | <u>Title</u> |
|---------------|--------------|---|
| T110 | 15¢ | Influence of quality of gas and other factors on the efficiency of gas mantle lamps. R.S. McBride, W. A. Dunkley, E. C. Crittenden, and A.H. Taylor. Tech. Pap. BS T110 (1918). |
| T117 | 10¢ | Toluol recovery. R. S. McBride, C. E. Reinicker, and W. A. Dunkley. Tech. Pap. BS T117 (1918). |
| T133 | OP | Tests of flexible gas tubing. R. S. McBride and W. M. Berry. Tech. Pap. BS T133 (1919). |
| T134 | 5¢ | Experimental retort tests of orient coal. R.S. McBride and I. V. Brumbaugh. Tech. Pap. BS T134 (1919). |
| T137 | 10¢ | Coking of Illinois coal in Koppers-type oven. R. S. McBride. Tech. Pap. BS T137 (1919). |
| T193 | OP | Design of atmospheric gas burners. W. M. Berry, I. V. Brumbaugh, G. F. Moulton and G. B. Shawn. Tech. Pap. BS T193 (1921). Superseded by Cir. 304. |
| T200 | OP | An investigation of oxyacetylene welding and cutting blowpipes with special reference to their economy in operation, safety, and design. R. S. Johnston. Tech. Pap. BS T200 (1921) |
| T212 | 10¢ | Carbon monoxide in the products of combustion from natural gas burners. I. V. Brumbaugh and G. W. Jones. Tech. Pap. BS <u>16</u> , 431 (1921). |
| T222 | OP | Relative usefulness of gases of different heating value and adjustments of burners for changes in heating value and specific gravity. W. M. Berry, I. V. Brumbaugh, J. H. Eiseman, G.F.Moulton, and G.B.Shawn. Tech. Pap. BS <u>17</u> , 15 (1922). |
| T290 | 30¢ | Relation between the heating value of gas and its usefulness to the customer. E. R. Weaver. Tech. Pap. BS <u>19</u> , 347 (1925). |
| T303 | 30¢ | Causes of some accidents from gas appliances. I. V. Brumbaugh. Tech. Pap. BS <u>20</u> , 47 (1925). |
| T304 | OP | A method of testing gas appliances to determine their safety from producing carbon monoxide. E. R. Weaver, J. H. Eiseman, and G. B. Shawn. Tech. Pap. BS <u>20</u> , 125 (1925). |

Series Price

Title

Circulars

| | | |
|------|-----|---|
| C48 | OP | Standard methods of gas testing. Cir. BS C48 2nd ed. (1916). (To be revised) |
| C55 | OP | Measurements for the household. Cir. BS C55 1st ed. (1915). Contains chapter on domestic use of gas. |
| C65 | OP | Gas calorimeter tables. Cir. BS C65 1st ed. (1917). Superseded by C417 (1938). |
| C68 | OP | Public utility service standards of quality and safety. Cir. BS C68 (1917). |
| C70 | 50¢ | Materials for the household. Cir. BS C70 1st ed. (1917). Contains chapter on domestic use of gas. |
| C75 | OP | Safety for the household. Cir. BS C75, 1st ed. (1918). Contains chapter on domestic use of gas. Superseded by C397 (1932). |
| C116 | 5¢ | How to get better service with less natural gas in domestic gas appliances. Cir. BS C116 (1921). |
| C394 | 10¢ | Design of gas burners for domestic use. Cir. BS C394 (1931). |
| C397 | 25¢ | Safety for the household. Cir. BS C397 (1932). Contains a chapter on gas. |
| C404 | 5¢ | Cautions regarding gas appliance attachments. Cir. BS. C404 (1934). |
| C405 | 20¢ | Standards for gas service. Cir. NBS, C405 (1934) 5th ed. |
| C417 | 10¢ | Gas calorimeter tables. Cir. NBS, C417 (1938) A condensed set of operating and computing instructions for use with a flow gas calorimeter and tables of correction data. |
| C420 | 5¢ | Propane, butane, and related fuels. E.R. Weaver. Cir. NBS, C420 (1938). |

Publications in Other Journals

(The following are not Government publications and cannot be obtained from the Superintendent of Documents.)

Substitution of heating value for candlepower as a standard for gas quality. R. S. McBride. International Gas Congress (1915).

Composition of gas in relation to the performance of the Bunsen burner. R. S. McBride. Am. Gas Light J. 103 (1915). (53 Park Pl. New York City)

Some principles underlying gas and fuel supply. R. S. McBride. Gas Age (9 E. 38th St., New York City) 44, 529 (1919).

Effect on combustion and efficiency of replacing the grid of an open-top gas range with an attachable solid top. J. H. Eiseman. Am. Gas J., 128, 27 (1928). (53 Park Pl. New York City)

Comparing the resistance to corrosion of materials used as linings in gas-fired domestic ranges. Otto Lutherer and E. R. Weaver. Am. Gas J. 132, 41 (1930).

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