

APPENDIX III

LIST OF ASTM SYMPOSIUMS AND TECHNICAL PAPERS ON INDUSTRIAL WATER

Committee D-19 has sponsored many symposia and discussions of various phases of the use of industrial water. The resulting papers have been published at several times and different places. For convenience in locating this literature relating to the subject of this Manual, a complete listing is given below.

1934

- M. C. SCHWARTZ AND W. B. GURNEY, "The Determination of Traces of Dissolved Oxygen by the Winkler Method," *Proceedings*, Vol. 34, Part II, p. 796 (1934).
- SHEPPARD T. POWELL, "Water as an Engineering and Industrial Material," ninth Edgar Marburg Lecture, presented at 1934 Annual Meeting of A.S.T.M. in Atlantic City, N. J., June, 1934; *Proceedings*, Vol. 34, Part II, p. 3 (1934).
- FREDERICK G. STRAUB AND T. A. BRADBURY, "A Method for the Embrittlement Testing of Boiler Waters," *Proceedings*, Vol. 38, Part II, p. 602 (1938).
- J. B. ROMER, W. W. CERNA, AND H. F. HANNUM, "The Estimation of Sodium in Water Supplies by an Indirect Method," *Proceedings*, Vol. 38, Part II, p. 638 (1938).
- P. G. BIRD, "Removal of Dissolved Salts from Water by Exchange Filters," *Proceedings*, Vol. 38, Part II, p. 631 (1938).

1936

- ALFRED H. WHITE, CLAUDE H. LELAND, AND DALE W. BUTTON, "Determination of Dissolved Oxygen in Boiler Feed Water," *Proceedings*, Vol. 36, Part II, p. 697 (1936).
- W. C. SCHROEDER, A. A. BERK, AND EVERETT P. PARTRIDGE, "Effect of Solution Composition on the Failure of Boiler Steel Under Static Stress at 250 C.," *Proceedings*, Vol. 36, Part II, p. 721 (1936).
- R. M. HITCHENS AND R. W. TOWNE, "The Rate of Reaction of Sodium Sulfite with Oxygen Dissolved in Water," *Proceedings*, Vol. 36, Part II, p. 687 (1936).
- W. C. SCHROEDER, A. A. BERK, AND EVERETT P. PARTRIDGE, "The Use of Solubility Data to Control the Deposition of Sodium Sulfate or Its Complex Salts in Boiler Waters," *Proceedings*, Vol. 36, Part II, p. 755 (1936).
- R. C. ULMER, "Determination by the Evaporation Method of Small Amounts of Dissolved Solids in Water Such as Condensed Steam from Boilers," *Proceedings*, Vol. 39, p. 1221 (1939).
- A. M. AMOROSI AND J. R. McDERMET, "The Calculation of the Distribution of Carbon Dioxide Between Water and Steam," *Proceedings*, Vol. 39, p. 1204 (1939).
- D. S. MCKINNEY, "The Calculation of Equilibria in Dilute Water Solutions," *Proceedings*, Vol. 39, p. 1191 (1939).
- RICHARD C. COREY AND THOMAS J. FINNEGAN, "The pH Dissolved Iron Concentration and Solid Product Resulting from the Reaction Between Iron and Pure Water at Room Temperature," *Proceedings*, Vol. 39, p. 1242 (1939).

1940

- R. T. SHEEN AND C. A. NOLL, "Determination of Hardness in Water by Direct Titration," *Proceedings*, Vol. 37, Part II, p. 609 (1937).
- EVERETT P. PARTRIDGE, "Some Applications of the Polarizing Microscope to Water-Conditioning Problems," *Proceedings*, Vol. 37, Part II, p. 600 (1937).
- T. H. DAUGHERTY, "Technique in the Determination of Dissolved Oxygen," *Proceedings*, Vol. 37, Part II, p. 615 (1937).
- Symposium on Problems in the Classification of Natural Water Intended for Industrial Use, *Proceedings*, Vol. 40, pp. 1305 to 1353 (1940): Robert C. Adams, "Reporting the Results of Water Analysis."
- V. V. Kendall, "A Review of Data on the Relationship of Corrosivity of Water to Its Chemical Analysis."
- Everett P. Partridge and G. B. Hatch, "Measuring the Scale-Forming and Corrosive Tendencies of Water by Short-Time Tests."
- J. H. Walker, "A Method of Measuring Corrosiveness."

1941

- BAKER WINGFIELD, W. H. GOSS, WALTER J. HAMER, AND S. F. ACREE, "The Need for pH Standards," ASTM BULLETIN, No. 90, January, p. 15 (1938).
- Boiler Feedwater Studies. Report of Joint Research Committee, ASTM BULLETIN, No. 111, August, p. 56 (1941).

Symposium on Problems and Practice in Determining Steam Purity by Conductivity Methods, *Proceedings*, Vol. 41, pp. 1261 to 1338 (1941):

A. R. Belyea and A. H. Moody, "The Sampling of Steam and Boiler Water."

S. F. Whirl and W. A. Lower, "Experimental Methods for Determining Conductivity Corrections for Dissolved Gases in Steam Condensate."

D. S. McKinney, "Calculation of Corrections to Conductivity Measurements for Dissolved Gases."

P. B. Place, "The Degasification of Steam Samples for Conductivity Tests."

A. R. Mumford, "A New Type of Conductivity Apparatus for Use with Boiler Waters and Steam Samples."

C. E. Kaufman, "Conductivity Cells and Electrical Measuring Instruments."

1942

Round-Table Discussion on the Solvent Action of Water Vapor at High Temperature and Pressure, *Proceedings*, Vol. 42, pp. 977 to 1020 (1942):

George W. Morey, "Solubility of Solids in Water Vapor."

1943

ROBERT C. ADAMS, ROBERT E. BARNETT and DANIEL E. KELLER, JR., "Field and Laboratory Determination of Dissolved Oxygen," *Proceedings*, Vol. 43, p. 1240 (1943).

R. C. ULMER, J. M. REYNAR, and J. M. DECKER, "Applicability of the Schwartz-Gurney Method for Determining Dissolved Oxygen in Boiler Feedwater and Modification of the Method to Make It Especially Applicable in the Presence of Such Impurities as Are Encountered in Power Plants," *Proceedings* Vol. 43, p. 1258 (1943).

Symposium on the Identification of Water-Formed Deposits, Scales, and Corrosion Products by Physico-Chemical Methods, *Proceedings*, Vol. 43, pp. 1269 to 1308 (1943):

C. E. Imhoff and L. A. Burkardt, "X-ray Diffraction Methods in the Study of Power Plant Deposits."

Everett P. Partridge, R. K. Scott, and P. H. Morrison, "Diagnosis of Water Problems at Limbo Station."

J. A. Holmes and A. O. Walker, "The Interpretation of Analyses and Problems Encountered in Water Deposits."

1944

Boiler Feedwater Studies Joint Research Committee, *Proceedings*, Vol. 44, p. 504 (1944).

Round-Table Discussion on Organizing the Classification of Industrial Waters, *Proceedings*, Vol. 44, pp. 1051 to 1082 (1944):

W. D. Collins, "Typical Water Analyses for Classification with Reference to Industrial Use."

Lewis B. Miller, "The Use of Selected Waters in Pulp and Paper Manufacture."

R. E. Hall, "Treatment of Various Types of Waters for Operating Pressures Above 400 psi."

J. A. Holmes, "Classification of Feedwater for Boilers Operating Between 100-400 psi."

1947

Round Table Discussion on Water-Formed Deposits, *Proceedings*, Vol. 47, pp. 1088 to 1117 (1947):

Michael Fleischer, "Some Problems in Nomenclature in Mineralogy and Inorganic Chemistry."

Alton Gabriel, Howard Jaffe, and Maurice Peterson, "Use of the Spectroscope in the Determination of the Constituents of Boiler Scale and Related Compounds."

J. F. SEBALD, "An Evaluation of Test Methods for the Oxygen in Deaerated Boiler Feedwater," *Proceedings*, Vol. 47, p. 1121 (1947).

1948

Panel Discussion on Corrosion of Pressure Vessels. *Proceedings*, Vol. 48, pp. 897 to 926 (1948):

R. B. Donworth, "Station Design and Composition of Materials as Factors in Boiler Corrosion."

Richard C. Corey, "Corrosion of High-Pressure Steam Generators: Status of Our Knowledge of the Effect of Copper and Iron Oxide Deposits in Steam Generating Tubes."

1949

Round Table Discussion on Standards for Water-Borne Wastes, ASTM BULLETIN, No. 16, December (1949):

George D. Beal and S. A. Braley, "Analysis of Water-Borne Industrial Wastes: The Need for Uniformity in Methods of Analysis and Reporting."

Charles F. Hauck, "Gaging and Sampling Water-Borne Industrial Wastes."

1950

Max Hecht, "Industrial Water and Water-Borne Industrial Waste," ASTM BULLETIN, No. 168, September, p. 31 (1950).

1951

Symposium on Flame Photometry, STP 116, Am. Soc. Testing Mats. (1951): R. K. Scott, W. M. Marcy, and J. J. Hronas, "The Flame Photometer in the Analysis of Water and Water-Formed Deposits."

1952

Symposium on Continuous Analysis of Industrial Water and Industrial Waste Water, STP 130, Am. Soc. Testing Mats. (1952):

M. F. Madarasz, "Automatic Sampling of Industrial Water and Industrial Waste Water."

Robert Rosenthal, "Some Practical Aspects of the Measurement of pH, Electrical Con-

ductivity and Oxidation-Reduction Potential of Industrial Water."

- A. E. Griffin, "Continuous Recording of Chlorine Residuals and Determination of Chlorine Demand."
- F. C. Staats, "Measurement of Color, Turbidity, Hardness, and Silica in Industrial Waters."
- J. K. Rummel, "Continuous Measurement of Dissolved Gases in Water."

1955

Symposium on High-Purity Water Corrosion, *STP 179*, Am. Soc. Testing Mats. (1955):

- F. N. Alquist, "The Preparation and Maintenance of High-Purity Water."
- H. W. Huntley and S. Untermyer, "The Use of Water in Atomic Reactors."
- Donald M. Wroughton, James M. Seamon, and Paul E. Brown, "Influence of Water Composition on Corrosion in High-Temperature, High-Purity Water."
- A. H. Roebuck, "Effect of Material Composition in High-Temperature Water Corrosion."
- R. U. Blaser and J. J. Owens, "Special Corrosion Study of Carbon and Low Alloy Steels."

1956

Symposium on Steam Quality, *STP 192*, Am. Soc. Testing Mats. (1956):

- W. B. Gurney, "Measurement and Purification of Steam to 0.01 ppm Total Dissolved Solids."
- E. E. Coulter and T. M. Campbell, Jr., "Steam Purity Determination by Tracer Techniques."
- R. O. Parker and R. J. Ziobro, "Comments on Corrections to Steam Conductivity Measurements."
- A. B. Sisson, F. G. Straub, and R. W. Lane, "Construction and Operation of Larson-Lane Steam Purity and Condensate Analyzers."

Symposium on Industrial Water and Industrial Waste Water, *STP 207*, Am. Soc. Testing Mats (1956):

- Claude K. Rice, "Three is a Vital Number." (The relations of the Public, Government and Industry in the measurement and abatement of stream pollution.)
- T. C. Wilson, "Industrial Waste Problems in Southern California."
- Carl B. Johnston, "Water Pollution Control in the Los Angeles Area."
- Robert C. Adams, "Committee D-19: The First Quarter Century."
- O. M. Elliott, "Sea Water Purification."
- J. K. Rice, "The Use of Organic Flocculants and Flocculating Aids in the Treatment of Industrial Water and Industrial Waste Water."

1957

Everett P. Partridge, "Your Most Important Raw Material—Water," thirty-first Edgar Marburg Lecture, presented at 1957 Annual Meeting of ASTM in Atlantic City, N. J., June, 1957.

Symposium on Determination of Dissolved Oxygen in Water, *STP 219*, Am. Soc. Testing Mats. (1957):

- K. G. Stoffer, "A Study of the Accuracy of Methods of Testing for Dissolved Oxygen in High-Purity Water."
- W. W. Eckenfelder, Jr. and Conrad T. Burris, "Polarographic Measurement of Dissolved Oxygen."
- Thomas Finnegan and Ross C. Tucker, "The Beckman Dissolved Oxygen Analyzer."
- A. J. Ristaino and A.A. Dominick, "Evaluation of Hartmann and Braun Dissolved Oxygen Recorder for Boiler Feedwater."
- H. A. Grabowski, "Determination of Dissolved Oxygen by Means of a Cambridge Analyzer."

1958

Symposium on Radioactivity in Industrial Water and Industrial Waste Water, *STP 235*, Am. Soc. Testing Mats. (1958):

- A. R. Belyea, "Introduction."
- A. Louis Medin, "Radioactivity and Purity Control of APPR Primary Water."
- S. F. Whirl and J. A. Tash, "Radioactive Waste Processing Control, Shippingport Atomic Power Station."
- C. J. Munter, "Test Methods for Radioactivity Hazards in Industrial Waters."
- B. Kahn, D. W. Moeller, T. H. Handley, and S. A. Reynolds, "Analysis for Radionuclides in Aqueous Wastes from an "Atomic" Plant."
- D. L. Reid, "Analysis of Environmental Samples for Radionuclides."
- L. R. Setter, G. R. Hagee, and C. P. Straub, "Analysis of Radioactivity in Surface Waters."
- J. M. Seamon, "Summation."
- L. R. Setter, G. R. Hagee, and C. P. Straub, "Analysis of Radioactivity in Surface Waters," *ASTM BULLETIN*, No. 227, January, p. 35 (1958).

1959

Symposium on Identification of Water-Formed Deposits, *STP 256*, Am. Soc. Testing Mats. (1959):

- J. K. Rice, "Deposit Identification—First Step Toward Understanding a Water Problem."
- C. H. Anderson, "The Application of Emission Spectroscopy to the Analysis of Water-Formed Deposits."
- C. M. Maddin and R. B. Rosene, "Identification by Instrumental Methods of Chemical Compounds in Water-Formed Deposits."
- E. A. Gulbransen and T. P. Copan, "Electron Microscopy and Electron Diffraction Studies of Oxide Films on Iron in Water and Oxygen Atmospheres."
- J. V. Smith, "Correlation of Elemental Analysis and Phase Identification as Viewed by a Mineralogist."
- R. K. Scott, "Summary."

- Symposium on Technical Developments in the Handling and Utilization of Water and Industrial Waste Water, *STP 273*, Am. Soc. Testing Mats. (1959):
- William L. Lamar, "Introduction."
- L. C. Schwendiman, R. E. Brown, J. F. Honstead, C. E. Linderth, and D. W. Pearce, "Disposal of Industrial Radioactive Waste Waters at Hanford."
- Franklin B. Barker, "Determination of Radioactive Materials in Water."
- Joseph J. Finnerty, "Utilization of Cooling Towers in Conservation and Pollution Control."
- R. B. Richman, "Improvements in Water Treatment for Once-Through Reactor Cooling."
- James M. Morris, Jr., "Disposal of Oil-Field Brines in the Central Valley of California."
- L. V. Wilcox, "Effect of Industrial Wastes on Water for Irrigation Use."
- William E. Katz, "Operation of Batch-Type and Continuous Electric Membrane Demineralizers."
- R. P. Lappala, L. I. Yaeger, and J. A. Bjorksten, "Solar Distillation of Saline Water with Particular Regard to Materials Problems."
- Frank E. Clarke, "Old Wine in New Bottles," *ASTM BULLETIN*, No. 243, January, p. 17 (1960).