or approximately 0.62 F deg per pound of air at any temperature. Air will drop 55 F deg per cubic foot for each Btu extracted. Generally, air will absorb from 2 grains to 5 grains per cubic foot of air in one passage through an air dryer, depending on the temperature and the degree of contact with the material. The amount of steam required to evaporate a pound of water will vary from 1.5 lb to a more usual figure of from 2.5 to 3 lb of steam per pound of water evaporated.

BIBLIOGRAPHY

Drying Apparatus, by H. C. Russell (A.S.H.V.E. TRANSACTIONS, Vol. 18, 1912, p. 76).

Commercial Drying Apparatus, by L. P. Dwyer (A.S.H.V.E. TRANSACTIONS, Vol. 22, 1916, p. 479).

Artificial Drying with Special Reference to the Use of Gas, by G. C. Shadwell (A.S.H.V.E. TRANSACTIONS, Vol. 23, 1917, p. 231).

Drying by Evaporation, by F. R. Still (A.S.H.V.E. TRANSACTIONS, Vol. 23, 1917, p. 255).

High Temperature Drying, by Burt S. Harrison (A.S.H.V.E. TRANSACTIONS, Vol. 24, 1918, p. 7).

The Temperature of Evaporation, by W. H. Carrier (A.S.H.V.E. TRANSACTIONS, Vol. 24, 1918, p. 25).

Address on Dehydration, by H. C. Gore (A.S.H.V.E. TRANSACTIONS, Vol. 24, 1918, p. 323).

Drying as an Air Conditioning Problem, by A. W. Lissauer (A.S.H.V.E. TRANSACTIONS, Vol. 27, 1921, p. 251).

A Chronological Survey of Drying and Driers, by J. E. Bolling (A.S.H.V.E. JOURNAL, Vol. 27, October, 1921, p. 715).

Thermodynamic Properties of Moist Air, by John A. Goff and S. Gratch (A.S.H.V.E. TRANSACTIONS, Vol. 51, 1945, p. 125).

Some Engineering Problems of the New Vegetable Dehydration Industry, by W. B. Van Arsdel (A.S.H.V.E. TRANSACTIONS, Vol. 49, 1943, p. 49).

Adiabatic Drying of Hygroscopic Solids, by A. M. McCready and W. L. McCale (*Transactions, American Institute Chemical Engineers*, 1933).

Limitations of Diffusion Equations in Drying, by O. A. Hougen, H. J. McCauley and W. R. Marshall (*Transactions, American Institute of Chemical Engineers*, 1940).

Factors Influencing the Performance of Rotary Dryers, by C. F. Prutton and C. O. Miller (*Transactions, American Institute of Chemical Engineers*, Part 1, February, 1942; Part 2, August, 1942).

Drying of Solids by Through Circulation, by W. R. Marshall and O. A. Hougen (*Transactions, American Institute of Chemical Engineers*, 1942).

Factors that Influence Drier Performance, by A. Weisselberg (*Chemical and Metallurgical Engineering*, August, 1932).

Typical Dryer Calculations, by O. A. Hougen (*Chemical and Metallurgical Engineering*, January and March, 1940).

Symposium on Drying, Articles by W. K. Lewis, W. H. Carrier, A. E. Stacey, Jr. and R. S. Fleming, R. G. Metz, G. B. Ridley, C. O. Lavett, D. J. Van Marle (*Journal Industrial Engineering Chemistry*, May, 1921).

Principles of Drying Lumber and Humidity Diagram, by H. D. Tiemann (*Forest Service Bulletin* 104, 1912).

The Drying of Solids, by T. K. Sherwood (*Bulletin Massachusetts Institute of Technology*, Nos. 237, 247 and 258).

Radiant Energy Drying with Heat Lamps, by T. P. Brown, *Metal Industry*, Vol. 37, Dec. 1939, p. 607).

Drying by Sublimation, by E. W. Flosdorf (*Food Industry*, Vol. 17, Jan. 1945, p. 607).

Evaporative Drying System, by F. H. Slade (*Food Manufacturing*, Vol. 18, March, 1943, p. 70).

High Frequency Methods in Gluing and Drying Wood, by I. R. Berkness (*Wood Products*, Vol. 45, 1940, p. 12).

Development of the Unit Operations of Chemical Engineering: Drying, by T. K. Sherwood (*Chemical & Metallurical Engineering*, Vol. 42, p. 214).

The Spray Dryer—Its Possibilities in Industry, by D. W. Bicheno (*Food Manufacturing*, Vol. 19, June, 1944, p. 195).

Mechanism and Rate of Drying by Near-infra-red Radiation, by L. E. Stout, K. J. Caplan and W. G. Baird (*Transactions American Institute of Chemical Engineers*, Vol. 41, 1945, p. 283).

An Introduction to Convection Drying and Drying Calculations, by V. P. Victor, (*Heating and Ventilating*, Vol. 41, 1944, p. 67).

Electronic Dehydration of Foods, by V. W. Sherman (*Electronics*, Vol. 17, 1944, p. 94).

Air Conditioning and Engineering, American Blower Co., 1935.

Drying in Industrial Plants, by J. O. Ross.

Elements of Chemical Engineering, by Badger and McCabe (McGraw Hill Co., 1931).

Fan Engineering, Buffalo Forge Co.

Die Trockentechnik, by M. Hirsch (Julius Springer, Berlin, 1932).

Drying (*Kent's Mechanical Engineers Handbook*).

Drying, by W. H. Carrier (*Marks' Mechanical Engineers Handbook*).

Drying (*Perry's Chemical Engineers Handbook*, 1941).

Kiln Drying of Lumber, by A. Koehler and R. Thelen, New York, 1926.

Kiln Drying of Lumber, by H. D. Tiemann (Lippincott, 1920).

Modern Drying Machinery, by H. B. Grenshaw, London, 1926.

Principles of Chemical Engineering, by Walker, Lewis, McAdams (Chapters on Evaporation, Humidity and Drying, McGraw Hill Co.).