

Part II. deals with the factors of evaporation discussing feed water temperatures, and the comparative efficiencies of auxiliary apparatus.

In Part III., under complete plant economy the authors discuss three types of plants, viz.; (1) non-condensing, (2) surface condensing, (3) jet condensing, developing formulae in each case for obtaining the economy of the plant, with tables and graphic representation of these formulae. Examples of their use are appended.

Part IV. contains a discussion of the economy of a plant working under variable load, with numerous load curves and diagrams, illustrating deduced formulae by examples.

The book forms a most valuable treatise on plant economy, illustrating the importance of the fuel economy factor in the design of the power-station. It will prove a most useful book to the designing engineer and the student, containing specific information which cannot be obtained in such complete form elsewhere.

Electric Smelting of Iron Ores.—As a sequence to the reports on Electric Smelting of Iron Ores, published in 1904, 1906, and 1907, the Mines Branch of the Department of Mines of Canada has just issued the results of "An Investigation of an Electric Shaft Furnace" in operation at Domnarfvet, Sweden. The investigation was made by Dr. Eugene Haanel, in December, 1908, on the invitation of the inventors, and the results given represent the latest developments of the electric smelting of iron ores.

The report contains 38 pages and is divided into four parts.—Part I deals with the Domnarfvet furnace, the trial runs witnessed by the writer of the report and the comparative costs of production of pig-iron by the furnace. The other three parts which are more of the nature of appendices, describe:—(1) A new electric furnace for the manufacture of steel, (2) the manufacture of electrodes, (3) methods of manufacturing wood-charcoal, this material being used to supply the carbon which enters into the composition of pig-iron manufactured by electric smelting.

Three full page plates, from photographs, and numerous drawings, illustrate clearly the descriptive matter of the book, which, taken in conjunction with the reports previously published by the Mines Branch on the subject of electric smelting, brings up to date the literature on the electro-metallurgy of iron.

The "Report on the Investigation of an Electric Shaft Furnace" at Domnarfvet, Sweden, may be obtained on application to Dr. Eugene Haanel, Director of Mines, Department of Mines of Canada, Ottawa.

PUBLICATIONS RECEIVED.

Hydroelectric Developments and Engineering.—By Frank Koester. Assoc. Mem. Am. Inst. E.E., 454 pp., 500 illustrations, price, \$5. D. Van Nostrand Company, publishers, 23 Murray, and 27 Warren Streets, New York, U.S.A.

Electric Railway Power Stations.—By Calvin F. Twingle, M.E., 720 pp., 6 x 9, cloth, \$2. Frederick J. Drake & Company, publishers, Chicago, Ill.

The Fire-Resistive Properties of Various Building Materials.—By Richard L. Humphrey, 100 pp., 6 x 9. Bulletin 370, Dept. of the Interior, N.S., Geological Survey, Technologic Branch, Washington, D.C.

Simplified Methods of Calculating Reinforced Concrete Beams.—By W. Noble Twelvetrees, M.I. Mech. E. A.M.I.E.E., M.R.S.I., 25 pp., pocket size; 15 cents. Whitaker & Company, publishers, 2 White Hart St., Paternoster Square, London, E.C., and 64-66 Fifth Avenue, New York, U.S.A.

Canadian Annual Review of Public Affairs, 1908.—By J. Castell Hopkins, 669 pp., 6 x 9, cloth, \$5. (?)—Annual Review Publishing Company, 2 College Street, Toronto.

Railroad Promotion and Capitalization in the United States.—By Frederick A. Cleveland, Ph.D., and Fred. Wilbur Powell, A.M., 365 pages, 6 x 9, cloth. Longmans, Green & Company, 91 and 93 Fifth Avenue, New York, and London, England.

Practical Armature and Magnet Winding.—By Horstmann and Tousley, 250 pages, pocket size. Morocco leather binding, price, \$1.50. Frederick J. Drake & Company, publishers, Chicago, Ill.

Wrought-Iron Cement-Lined Water Pipe.—By Leonard Metcalf, civil engineer, Boston, Mass., 90 pp., 6 x 9.

Waterproofing.—By Myron H. Lewis, C.E., 260 pp., 6 x 9, reprinted from paper read before the municipal engineers of the city of New York. Engineering News, Book Department, 220 Broadway, New York City.

Tungsten Ores of Canada: A Report by T. L. Walker, M.A., Ph.D., containing 60 pages, 6 x 9; Pub. Doc., Mines Branch, Ottawa. Hon. W. Templeman, Minister.

Journal of the American Society of Engineering-Contractors.—June 1, 1909, Vol. 1, containing constitution and list of members:—Daniel J. Haner, Secretary, Consulting Engineer, Park Row Building, New York City.

CATALOGUES.

Pumps.—A complete power driven outfit for use of contractors, builders, railroads, or on public works, where it is necessary to raise large quantities of water, or to handle water containing mud, sand, grit, gravel, coal, grain or chips, sewage, or any liquid that will flow, is described in Bulletin No. 500, which the Fuller and Johnson Manufacturing Company, of Madison, Wis., are just distributing. A price list is included.

Blueprints.—Several kinds of blueprint paper and a price list are dealt with by the Keuffel & Esser Company, Hoboken, N.J., in a pamphlet which has just been prepared for them. The directions given for obtaining the best results will undoubtedly be appreciated by men who have to do with blueprints and blueprinting.

Heating and Ventilating.—The best obtainable illustrations and descriptions of the Buffalo Fan System of heating, ventilating, humidifying and drying are given in catalogue 197, just published by The Canadian Buffalo Forge Company, of Montreal, Canada. Heating and ventilating buildings of all kinds is dealt with at some length in the first two sections. Part III. contains interesting matter regarding the apparatus itself, while Part IV. gives reliable data, with tables, on heating and ventilating, which has never before appeared in print. The volume, comprising 144 pages, is replete with valuable information.

Concrete Blocks.—A booklet issued by the Dominion Concrete Company, Limited, Kemptville, Ont., contains several illustrations which demonstrate the adaptability of concrete blocks for various kind of buildings. Builders will be interested in the publication, and the publishers will be pleased to send it to those interested, on application.

Supplies.—The Brydges Engineering & Supply Company, of Winnipeg, have issued a very handy catalogue cover, by which separate sheets of any line desired can be sent out to those desiring same. The device saves the expense of supplying anyone with the large amount of material in the ordinary catalogue, the majority of which they are not interested in.

Riveting Machines for structural, bridge and railroad work, boiler, tank and stack construction, which are manufactured by John F. Allen, 370-372 Gerrard Avenue, New York City, are dealt with in an interesting fashion by this old-established manufacturer. Copies of this pamphlet will be cheerfully sent upon application.

Valves.—Canada's highest grade valve, the "Standard Crown," is illustrated and described by the Standard Engineering Company, of Toronto, in a handy booklet, which also contains a price list that is useful for reference purposes.