

ENGINEER'S BOOKSHELF

REVIEWED IN THIS ISSUE

FRACTIONAL HORSEPOWER ELECTRIC MOTORS	ASTM SPECIFICATIONS FOR STEEL-PIPING MATERIALS
THE FRACTURE OF METALS	MATERIAL HANDLING
HEATING AND VENTILATING BUYERS' DIRECTORY	INDUSTRIAL ELECTRONICS REFERENCE BOOK
IMPROVING SUPERVISION	BATTLEFRONTS OF INDUSTRY

Fractional-Hp Motors

FRACTIONAL HORSEPOWER ELECTRIC MOTORS (second edition—1948). By Cyril G. Veinott, manager, induction-motor section, small-motor division, Westinghouse Electric Co. 554 pp. 6½x9½; illust. \$5. McGraw-Hill Book Co., 330 West 42nd St., New York 18, N. Y.

This story of fractional-hp motors shows what types and kinds are available and what makes them run. The book is written primarily for those interested in installation, maintenance and repair of the fractional-hp motor.

Eight chapters have been rewritten. All original material for motor repairmen is rearranged in more convenient form. The chapter on motor selection will help application engineers choose the right motor for the job.

New material discusses windings with dissimilar coils, insulating varnishes, including dipping and baking procedures and a description of an electronic winding-insulation tester. There is a complete description of the all-purpose capacitor motor used in unit-heater service.

Heating and Ventilating

HEATING AND VENTILATING BUYERS' DIRECTORY: 320 pp. 5½x8½ paper. \$1. The Industrial Press, 148 Lafayette St., New York 18, N. Y.

A product directory that lists (1) manufacturers by name (2) supply sources for equipment, services. A trade-name section includes current and obsolete trade names, together with the product it is associated with, and the manufacturer's name. A closing section carries a separate listing of manufacturers' street addresses.

Metal Fracture

THE FRACTURE OF METALS. By M. Gensomer, E. Seibel, J. T. Ransom, R. E. Louie. 58 pp. 6x9, paper. \$1. American Society of Welding Engineers, 33 W. 39th St., New York 18, N. Y.

Reviews, literature and interviews with experts are summarized for up-to-date information on fracture problems.

Originally in report form to Bureau of

Ships, U. S. Navy, booklet divides into two parts: Part I includes original literature survey, and an analysis of fracture theories and application of principles. Part II is a supplement that builds upon Part I with new developments in theories of fracture and plastic flow. A research program is outlined; over 500 references form a bibliography.

Supervision Training

IMPROVING SUPERVISION. By Frank and Robt. W. Cashman. 232 pp. 5x7½, cloth. \$2.50. John Wiley & Sons, Inc., 440-4th Ave., New York 16, N. Y.

Here's a follow-up in a foreman- or supervisor-training program. Its value to the power engineer applies most to (1) shift or watch engineers (2) maintenance foremen who have direct relations with younger men breaking into the power game.

This book stresses the human side of developing and bringing along operating workers to accept and understand the management side of the supervisor's responsibilities. Once some acceptance is developed, next step is to get active participation among supervisors on a foreman-meeting system to prevent or correct problems that creep up in plant management.

Material Handling

MATERIAL HANDLING. By engineers of General Electric Co. (1948 new). 93 pp. 8½x11, heavily illustrated, stiff paper. \$1. General Electric Co., Schenectady, N. Y.

Here are modern methods of handling materials—one of industry's No. 1 problems—in the three major operations of receiving, shipping and warehousing. Also included are a comprehensive survey of material-handling equipment, methods and practices, and a convenient compilation of engineering data of interest to manufacturers, engineers, warehouse men, electrical contractors and power-sales engineers.

The eight sections cover: modern material handling; material-handling equipment and applications; results with modern equipment; how to make a material-handling survey; engineering data on conveyors, cranes and hoists, trucks and tractors, battery charging and fundamental

formulas; list of material-handling equipment manufacturers; General Electric offices; bibliography of material-handling literature. Illustrations offer a wealth of information on how to apply material-handling equipment efficiently.

Piping Specifications

ASTM SPECIFICATIONS FOR STEEL PIPING MATERIALS, 315 pp. heavy paper, 8½x11. American Society for Testing Materials, 1915 Race St., Philadelphia 3, Pa.

This book gives in the latest form as of Dec. 1947 all specifications covering steel piping materials—pipe, tubes, castings, bolting, etc.

There are widely used specifications covering pipe for service at normal and elevated temperatures; several carry 47 designations. In the field of tubing for boilers and superheaters 13 specifications cover seamless, welded and other types of tubing involving a wide range of chemical composition and properties. There are three specifications each for still tubes and heat-exchanger and condenser tubes. Five relate to castings for general application and high-temperature service. Three standards pertain to forgings or rolled pipe flanges and one covers welded fittings. Three relate to bolting. The book is made complete by including the classification of grain size in steel, E-19, with its two charts.

Industrial Electronics

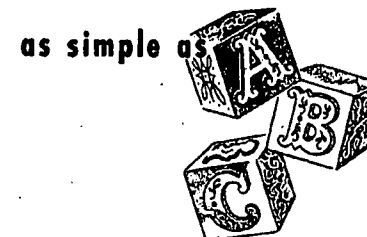
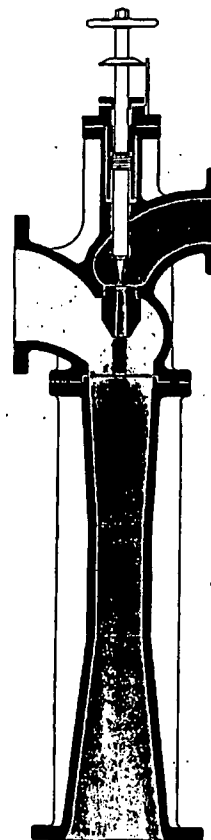
INDUSTRIAL ELECTRONICS REFERENCE BOOK. By Electronic Engineers of the Westinghouse Electric Corp. (1948 new). 602 pp. 9x12, heavily illust. cloth. \$7.50. John Wiley & Sons, 440-4th Ave., New York 16, N. Y.

To insure that electronics as an industrial tool is used properly, 37 electronic engineers have written a digest of applications and design data on industrial electronic equipment. It is aimed at practicing engineers faced with understanding the principles as well as the scope and limiting factors of electronic apparatus as applied to industrial processes.

Here's what the chapters cover: fundamental and theoretical concepts; basic laws governing production and control of electrons; 4-10, design, operation and construction features of electronic tubes, such as vacuum, gas-filled, X-ray, cathode-ray, photoelectric devices; ultraviolet radiators; 11-14, electronic circuit components, such as diodes, resistance forms, capacitance and inductance, tuned circuits, filters and transformers; 15-18, rectifier, amplifier, motor and control circuits; 19-20, design and application factors for transmission lines and antennas; 21-34, different types of industrial equipment; 35-36, factors in industrial equipment.

(Continued on page 164)

as a "reason why"



as simple as

With an A Jet Compressor...

Circulation of steam for better heating...

Boosting of low pressure steam...

And mixing of gases in desired proportion...

Become as simple as ABC.

The A Jet Compressor...

Utilizes a jet of high pressure gas...

To entrain a low pressure gas...

Mix the two...

And discharge them...

At an intermediate pressure.

The A Jet Compressor is of simple construction...

With no rapidly revolving parts...

To get out of order...

Adjust or repair.

It reduces wear to a minimum...

Requires little maintenance...

Operates economically...

With maximum efficiency.

Write for A Bulletin 4-F...

It contains detailed information.



SCHUTTE and KOERTING Company

Manufacturing Engineers

1150 THOMPSON ST., PHILADELPHIA 22, PA.

IFT APPARATUS • CONDENSERS AND VACUUM PUMPS • HEAT TRANSFER EQUIPMENT
VALVES • DISTILLERS AND FLOW INDICATORS • SEAR PUMPS • STRAINERS
AND PULVERIZERS • SPRAY NOZZLES AND ATOMIZERS • DRYING TUBES