PLANT ENGINEER'S BOOKSHELF

Piping Handbook

Facility Piping Systems Handbook fulfills a need for a single source containing complete information required to design, select, and install all categories of service and utility piping systems that are an integral part of all facilities. In addition to system piping, valves, joints, and equipment, other closely interrelated subjects integral to each system such as filters, insulation, interceptors, water treatments, and freeze protection are included. Typical piping specifications are provided as well as a list of trade organizations that have proven invaluable when specialized information is required.

The book is intended for use as a practical working guide and everyday reference by design professionals of all disciplines concerned with building construction and operation. No prior knowledge of engineering subjects is necessary for the complete understanding of the material included. Written in nontechnical language and profusely illustrated, practical applications of the criteria are given rather than derivations. All of the necessary piping and component design criteria, schematic details of system installation, and specifications of a system are included. Another aspect of information provided is the use of proved and accepted empirical design criteria found only through experience.

Material is organized into chapters that contain individual subjects, systems, or groups of related subjects. Chapters are separated into system and component descriptions, system fundamentals, codes and standards, and sizing and selection criteria for the components and the piping network. Sequential procedures for sizing system components and the piping network are given special attention. Examples showing solutions to actual field-related problems are provided to illustrate the use of tables, figures, and formulas. Particular attention is given to system schematic diagrams that illustrate system operation and detail the accepted installation and arrangement of system components.

Facility Piping Systems Handbook by Michael Frankel, CIPE. Published by McGraw-Hill, Inc., 11 W. 19th St., New York, NY 10011; 212-337-5951. 1996, hardbound, 1018 pp. $85.

— Joseph L. Foszcz

Guide for Implementing TPM

There are lots and lots of books about Total Productive Maintenance (TPM), and although this book is not new, it's one of the most helpful we've seen. Written by the professional who engineered the famous TPM implementation at Tennessee Eastman, *TPM That Works* presents a program that can be followed almost step-by-step right out of the book. Copious diagrams, tables, checklists, and outlines should prove invaluable to the TPM implementor.

Beginning with concise explanations of what TPM is and why it should be used, the contents move through team structuring, three chapters on implementation, reinforcement, and details on the Tennessee Eastman experience.

Anyone trying to move toward a TPM organization will find numerous invaluable helps, from models of reporting forms to an outline for a "sales pitch" for gaining management support. There are even sample agendas for conducting TPM workshops and numerous checklists for the TPM coordinator to use at every step of the implementation process. In short, the book eliminates the need to "reinvent the wheel" and saves innumerable hours normally spent in planning such programs.

Granted, this handbook is no panacea. But the skeleton for a successful TPM program is all here.

TPM That Works — The Theory and Design of Total Productive Maintenance, A Guide for Implementing TPM by Bill N. Maggard, PE. Published by TPM Press, Inc., 4018 Letort Lane, Allison Park, PA 15101; 412-486-6340; fax: 412-486-6375. 1992, hardbound, 202 pp. $39.95.

— Richard L. Dunn

Text Offers Designs To Improve Air Quality While Conserving Energy

A hands-on reference, *Improving Indoor Air Quality Through Design, Operation, and Maintenance* provides specific guidelines for assessing and measuring indoor air contaminants. It outlines engineering, maintenance, and operational procedures to apply to correct problems associated with "sick building syndrome" and ensure safe, quality indoor air.

The book examines a variety of solutions. Among them are retrofitting VAV systems with IAQ sensors, use of desiccants to remove air contaminants, and new ventilation efficiency techniques. All techniques presented are designed to provide quality indoor air environments while not sacrificing energy efficiency and can be implemented readily in new and existing buildings. Both state-of-the-art techniques and new methods are included.

A compilation of contributions from a variety of experts in the field, the text is divided into four sections: Introduction to Indoor Air Quality, Monitoring and Measuring Indoor Air Contaminant Concentrations, Practical Design Solutions that Improve Indoor Air Quality, and Operation and Maintenance Procedures to Improve Indoor Air Quality. Liberally illustrated with charts, tables, and drawings, the book also includes references for further reading at the end of each chapter.

Improving Indoor Air Quality Through Design, Operation and Maintenance by Milton Meckler. Published by The Fairmont Press, Inc., 700 Indian Trail, Lilburn, GA 30247. 1996, hardbound, 272 pp. $74.

— Jeanine Katzel