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# HOW TO USE THIS HANDBOOK

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As with any handbook, the user of this handbook can seek the topic covered either with the help of the table of contents or the index. However, an understanding of the organization and the format of this handbook will enhance its utility. The handbook is organized in five parts:

**Part A, Piping Fundamentals:** There are ten chapters in Part A, numbered A1 through A10, dealing with commonly used terminology associated with piping units—U.S. Customary units and metric/SI units, piping components, materials, piping codes and standards, manufacturing of piping, fabrication and installation of piping, bolted joints, prestressed concrete piping, and grooved and Pressfit piping systems. Each chapter is a self-contained unit. The chapter numbers, figures and tables sequentially preceded. For example, in the case of Chapter A1, the figures are numbered as Fig. A1.1, Fig. A1.2, and so on, and tables are numbered as Table A1.1, Table A1.2, and so on. Pages are numbered sequentially throughout each part, starting with A.1.

**Part B, Generic Design Considerations:** The Part B consists of fourteen chapters. The topics covered deal with generic design considerations, which may be applicable to any piping system irrespective of the fluid or the mixture carried by the piping. The generic topics are design documents, design bases, piping layout, stress analysis, piping supports, heat tracing, thermal insulation, and flow of fluids. In addition, the lined piping systems: cement, rubber, epoxy and plastic lined piping systems are included to provide guidance when corrosion is a concern. A chapter on double containment piping systems provides needed guidance to handle hazardous fluids. The last chapter in Part B deals with pressure testing of piping systems. The chapter, page, figure, and table numbering scheme is similar to that described for Part A.

**Part C, Piping Systems:** There are 17 chapters in Part C, each dealing with a specific type of piping system or systems involving application of specific considerations. The piping systems covered include water, fire protection, steam, building services, oil, gas, chemical and refinery (process piping), cryogenic, refrigeration, toxic and hazardous wastes, slurry and sludge, stormwater and wastewater, plumbing, ash handling, compressed air and vacuum, fuel gas and laboratory piping systems. The numbering approach for Part C is similar to Part A.

**Part D, Nonmetallic Piping:** Part D has two chapters, D1 and D2. Chapter D1 addresses thermoplastics piping, and Chapter D2 covers fiberglass piping systems. The numbering scheme for pages, figures, and tables is similar to the one followed for Part A.

**Part E, Appendixes:** Part E of the handbook contains reference technical data and information that could be very handy and useful to the users. It consists of 10 appendixes, E1 through E10. They include conversion tables, pipe and tube properties, pressure drop tables, ASTM and international piping materials, fluid properties, piping related computer programs, and an exhaustive list of international standards.

Depending upon the need, level of piping knowledge, and requirements, the

user of this handbook may find it very convenient to locate the desired information by focusing on a specific part of the handbook.

Last but not least, the Seventh Edition of *Piping Handbook* includes metric/SI units in parentheses. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. At times, unit equivalents are rounded off while at places they are approximated to provide a measure of equivalency. Different approaches have been followed depending upon the practices prevalent in a segment of the piping industry. We regret the variations and expect the users to understand the state of the art in regard to use of units. The users are cautioned to check and verify units prior to making calculations with the help of equations included in the handbook or elsewhere.