PERRY'S CHEMICAL ENGINEERS' HANDBOOK, EIGHTH EDITION

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BOOK DESCRIPTION

Perry´s Chemical Engineers' Handbook was first published in 1934 and it has readily been transformed in a huge source of chemical engineering information and data. It thus became essential to chemical engineers, first, and, almost immediately, to many other engineers and scientists. It is worldwide considered as an essential desk reference. With a big assortment of theory and practical data, it contains most of the information which is needed is several areas. The use of the book in the beginning may be considered by some as difficult but once engaged on it, it serves as a powerful tool.

It covers numerous items, from conversion factors, mathematical, physical and chemical data – two of the most very important sections of the book - to economics, equipment, waste management, energy and materials, which, in its Eighth Edition, are included in 25 Sections. It includes the contribution of a significant number of recognized experts in the several focused fields. The Handbook is broken into logical sections that once the reader has come to grips with the way the book is organized, makes finding information easy. They can be bought individually, which is a very interesting way to allow special aspects to be studied by anyone without acquiring the whole book.

Emphasis must be put on the fact that the latest advances in technology and processes, which came with the new millennium, namely relating aspects like distillation, liquid-liquid extraction, reactor modeling, biological processes, even chemical plants safety practices with case histories, were included now.

SI units have become more representative, since the seventh edition, and thus section 1 with conversion factors intends to help on that issue. Section 2 provides physical and chemical data, including constants for properties correlations. Section 3 includes essential mathematical tools. Section 4 to 7 are about Thermodynamics, Heat and Mass Transfer, Fluid and Plastic Dynamics and Reaction Kinetics. Section 8 covers Process Control and Section 9 Process Economics, dealing about cost control, and cost estimation. Transport and Storage of Fluids is treated in Section 10. Sections 11 to 21 deal with more specific aspects of chemical engineering unit operations, from Transport and Storage of Fluids in Section 11, to Solid-Solid Operations and Processing, in Section 21. Waste Management is explored in Section 22, covering 109 pages of detailed information on the subject, a very important aspect of interaction with other disciplines. In Section 23 Process Safety is investigated. Section 24 includes practical aspects of perhaps the most important issue of this century: Energy Resources, Conversion and Utilization and, finally, Section 25 deals with another aspect which deeply interacts with Energy, which is Materials of Construction.

Hundreds of detailed illustrations help the reader to understand subjects more easily and quickly.

It may be argued that to understand easily, in terms of matter and complexity, the contents of Perry's can be, in fact, equivalent to some graduated degree in chemical engineering.

ABOUT THE AUTHORS

DON W. GREEN, is Deane E. Ackers Distinguished Professor of Chemical and Petroleum Engineering and codirector of the Tertiary Oil Recovery Project at the University of Kansas in Lawrence, Kansas, where he has taught since 1964. He received his doctorate in chemical engineering in 1963 from the University of Oklahoma, where he was Dr. Perry's first doctoral student. Dr. Green has won several teaching awards at the University of Kansas, and he is a fellow of the American Institute of Chemical Engineers and an Honorary Member of the Society of Petroleum Engineers. He is the author of numerous articles in technical journals.

ROBERT PERRY, deceased, served as chairman of the Department of Chemical Engineering at the University of Oklahoma and program director for graduate facilities at the National Science Research Foundation. He was a consultant in various United Nations and other international organizations. From 1973 until his death in 1978, Dr. Perry devoted his time to a study of the cross impact of technologies within the next half century. The subjects under his investigation on a global basis were energy, minerals and metals, transportation and communications, medicine, food production, and the environment.

BOOK DETAILS

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