

BOOK REVIEW

S. PAREKH (Editor): *Reverse Osmosis Technology: Applications for High-Purity-Water Production*. Marcel Dekker, Inc. New York and Basel 1988, 516 pages

The book is the 35th volume in the Chemical Industries Series and fully explores how to purify water efficiently and economically by reverse osmosis technology.

Reverse osmosis (RO) is a well-established process in the production of potable water from brackish and seawater. Within the last 10 years, RO has been applied for production of ultrahigh-purity water for the pharmaceutical, biomedical, electronical and other industries. The prominent role of RO in these water purification areas is assured by its unique ability to remove ionic impurities, particulates and colloids, microorganisms, organic, and pyrogenic materials from water.

The content and the chapters of the book can be divided into two sections. The first section deals with the fundamentals of reverse osmosis process. The first chapter discusses the fundamental aspects of RO, the transport models and their applications. The second chapter provides a complete list of all commercially available RO membranes and configurations. Modeling of RO membrane devices and fouling in membrane processes are discussed in the third and fourth chapters, respectively.

The second section deals with the applications of reverse osmosis: in chapters five through nine the system design for brackish and seawater desalting, the electronic-grade water production using RO, the role of RO in production of laboratory water, RO for producing pharmaceutical-grade water and pure water by RO for the treatment of end-stage renal disease are discussed. The tenth chapter is devoted to the microbial adhesion and biofouling of RO membranes. The last chapter discusses the factors influencing the economics of reverse osmosis.

Each chapter is followed by references and list of symbols giving a short explanation of the terms used in the text. Numerous photographs, figures and tables help the readers to a better understanding.

The book ends with an alphabetic index.

Containing more than 200 excellent illustrations and over 450 citations, *Reverse Osmosis Technology* serves as an essential reference for chemical, process, environmental, biochemical, and biomedical engineers, microbiologists, pharmacologists and biotechnologists.

Gy. Pálmai