DESCRIPTION

A comprehensive and example oriented text for the study of chemical process design and simulation

Chemical Process Design and Simulation is an accessible guide that offers information on the most important principles of chemical engineering design and includes illustrative examples of their application that uses simulation software. A comprehensive and practical resource, the text uses both Aspen Plus and Aspen Hysys simulation software.

The author describes the basic methodologies for computer aided design and offers a description of the basic steps of process simulation in Aspen Plus and Aspen Hysys. The text reviews the design and simulation of individual simple unit operations that includes a mathematical model of each unit operation such as reactors, separators, and heat exchangers. The author also explores the design of new plants and simulation of existing plants where conventional chemicals and material mixtures with measurable compositions are used. In addition, to aid in comprehension, solutions to examples of real problems are included. The final section covers plant design and simulation of processes using nonconventional components. This important resource:

- Includes information on the application of both the Aspen Plus and Aspen Hysys software that enables a comparison of the two software systems

- Combines the basic theoretical principles of chemical process and design with real-world examples

- Covers both processes with conventional organic chemicals and processes with more complex materials such as solids, oil blends, polymers and electrolytes
• Presents examples that are solved using a new version of Aspen software, ASPEN One 9

Written for students and academics in the field of process design, *Chemical Process Design and Simulation* is a practical and accessible guide to the chemical process design and simulation using proven software.

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