Refinery Engineering. Integrated Process Modeling and Optimization

Description: Petroleum refining is one of the most important yet challenging industries, and continues to be a major contributor in the production of transportation fuels and chemicals. Current economic, regulatory and environmental concerns place significant pressure on refiners to upgrade and optimize the refining process. At the same time, new product demands are urging refiners to explore alternative processing units and feedstocks.

This textbook represents a pioneering and comprehensive introduction to this complex subject, using many of the tools and techniques currently employed in modern refinery process simulation.

Adopting a systematic and practical approach, the authors include the theory, case studies and hands-on workshops, explaining how to work with real data. As a result, senior-level undergraduate and graduate students, as well as industrial engineers learn how to develop and use the latest computer models for the predictive modeling and optimization of integrated refinery processes.

company website providing relevant spreadsheets and simulation files for all the models and examples presented in the book.

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