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Sommario/riassunto	"This book covers the application of methods and tools for energy optimization and process design. It focuses the application of these methods on petrochemical process units such as the aromatics process unit. The book provides practical methods and tools to industrial practitioners with the focus on improving industrial energy efficiency, reducing capital investment, and optimizing yields via better design, operation, and optimization. Broken down into six parts the book covers a range of topics including: Aromatics Process Description; Process Design Considerations; Petrochemical Separation Design; Process Integration; Process system optimization; Types of revamps; Equipment assessment; Common operating issues; and Troubleshooting case analysis to name a few. Aromatics processes are very important for our daily lives as they make our basic petrochemical building blocks: benzene, toluene, and xylenes (BTX). Benzene is used in the production of more than 250 different products; the most important benzene derivatives are ethylbenzene, cumene, and cyclohexanes. The xylene product, known as mixed xylene, contains four different C8 aromatic isomers: para-xylene, ortho-xylene, meta-

xylene, and ethylbenzene. Para-xylene is the most important aromatic isomer; it is used almost exclusively in the production of polyester fibers, resins, and films. Toluene is mainly used to produce benzene through hydrodealkylation. It is becoming increasingly important in the production of xylene through toluene disproportionation and transalkylation with C9 aromatics"--
