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Sommario/riassunto	A comprehensive overview of fluid dynamic models and experimental results that can help solve problems in centrifugal compressors and modern techniques for a more efficient aerodynamic design. Design and Analysis of Centrifugal Compressors is a comprehensive overview of the theoretical fluid dynamic models describing the flow in centrifugal compressors and the modern techniques for the design of more efficient centrifugal compressors. The author — a noted expert in the field, with over 40 years of experience — evaluates relevant numerical and analytical prediction models for centrifugal compressors with special attention to their accuracy and limitations. Relevant knowledge from the last century is linked with new insights obtained from modern CFD. Emphasis is to link the flow structure, performance and stability to the geometry of the different compressor components. Design and Analysis of Centrifugal Compressors is an accessible resource that combines theory with experimental data and previous research with recent developments in computational design and optimization. This important resource Covers the basic information concerning fluid dynamics that are specific for centrifugal compressors and clarifies the

differences with axial compressors Provides an overview of performance prediction models previously developed in combination with extra results from research conducted by the author Describes helpful numerical and analytical models for the flow in the different components in relation to flow stability, operating range and performance Includes the fundamental information for the aerodynamic design of more efficient centrifugal compressors Explains the use of computational fluid dynamics (CFD) for the design and analysis of centrifugal compressors Written for engineers, researchers and designers in industry as well as for academics specializing in the field, Design and Analysis of Centrifugal Compressors offers an up to date overview of the information needed for the design of more effective centrifugal compressors.

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