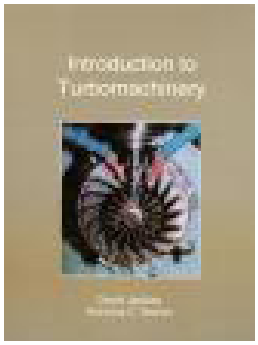
Concepts NREC

PROFESSIONAL DEVELOPMENT PROGRAM

# *Introduction to Turbomachinery*

The result of many years of teaching, research, and consulting within universities and the professional turbomachinery industry, this unique book presents comprehensive coverage of fundamental principles and industrial design, and also covers turbomachinery application diversity. It focuses on basic physical understanding but acknowledges advances in modern computing methods and experimental techniques made to the turbomachinery industry.

The text features an introduction to the broad diversity of turbomachinery - including pumps, compressors, and turbines - and its application in areas such as gas turbines, process compressors and expanders, turbochargers, and hydraulic turbines and pumps.




*Introduction to Turbomachinery*

David Japikse and Nicholas C. Baines

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**Introduction to Turbomachinery**
- General Introduction
- Introduction to Process Machinery
- Introduction to Turbochargers
- Introduction to Gas Turbine Staging
- Introduction to Pumps
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- Performance Modeling Parameters

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- The Euler-n Equation (Forces and Momentum Normal to a Streamline)
- Velocity Triangles and Vector Summation
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- Work Transfer, the Isentropic Process, and Efficiency
- Loss Coefficients
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**Essentials of Turbomachinery Durability**
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- Creep and the Larson-Miller Plot
- Principal Fatigue Modes and the Goodman Diagram
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