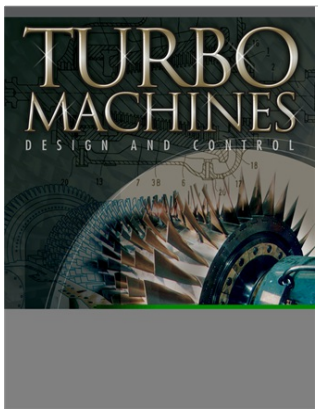
Book Information Sheet



Turbo Machines Design and Control, 1/e

Appuu Kuttan K.K.

2012	312 pp	Paperback	ISBN: 9789382332138	Price: 455.00

About the Book

Turbomachines: Design and Control is designed to serve as a textbook for undergraduate and postgraduate students of Mechanical Engineering and Aerospace Engineering. It covers the design aspects of thermal power plant, jet engines, wind mill, etc. Major area on the design of turbomachines covers basic design of aerodynamic principle, velocity diagram and its applications in the design of radial and axial flow machines, thermodynamic analysis of the turbomachines. A chapter is included in the design of controller for the speed control of turbomachines which includes classical control theory and multivariable control theory. For basic understanding a chapter on units and dimensions and compressible fluid flow is also included.

The author and publishers of this book have used their effort in preparing the book titles "Turbomachies: Design and Control". The effort include the development of basic theories and principles for the effectiveness of the book. The author and publisher make no warranty of any kind expressed in the document contained in the book. The author and publisher shall not be liable in any event for incident or consequential damage in connection with or arising out of the use of the book. This book is intended for the fundamental understanding of the turbomachines subject to the students.

Salient Features

- Units, dimensions and dimensional analysis
- Foundations on compressible fluid flow
- Aerodynamic analysis of body in fluid flow
- The power equations of turbomachines
- Velocity diagram and it applications in radial and axial flow machine design
- Fundamentals of classical control theory applied to turbomachines
- Application of modern control theory in jet engine control
- Advance topics such as air breathing engines, rockets, SCRAM jets and flying of birds and insects

Table of Contents

- Units and Dimensional Analysis
- Foundation on Compressible Fluid Flow
- Flow Past Immersed Body
- Turbo Machines Classifications and Analysis
- Radial Flow Turbomachines
- Axial Flow Turbomachines
- Thermodynamic Analysis of Turbomachines
- Special Topics in Turbomachies
- Control Systems in Turbomachines
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