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Nota di contenuto	Cover -- Half Title -- Title Page -- Copyright Page -- Dedication -- Table of Contents -- Preface -- Chapter 1-Introduction to Energy, Heat and Thermodynamics Units, concepts, terms, principles, laws and equations pertaining to energy and thermodynamics. Heat and energy conversion. Types of specific heat, energy transformation and associated case study -- Chapter 2-Thermodynamics and Power Concepts of power and power conversion. Steam to wire power and energy transformation, and associated case study -- Chapter 3-Study of Enthalpy and Entropy Enthalpy, entropy and associated case study -- Chapter 4-Understanding Mollier Diagram Mollier diagram -- the enthalpy-entropy graph, its use and application -- Chapter 5-Saturated and Superheated Steam Tables Understanding of saturated and superheated steam tables -- applications, thereof, and associated case study -- Chapter 6-Phases of Water and Associated Thermodynamics Phases and critical properties of substances, with emphasis on water, vapor and steam -- Chapter 7-Laws of Thermodynamics Laws of thermodynamics, associated formulas, applications and associated case

study -- Chapter 8-Thermodynamic Processes Thermodynamic processes, heat engine cycles, steam turbines, temperature-enthalpy diagrams, pressure-enthalpy diagrams, pressure-volume diagrams, temperature-entropy diagrams, practical examples and associated case study. -- Chapter 9-Gas Dynamics High velocity gas flow and thermodynamics -- Chapter 10-Psychrometry and Psychrometric Analysis Psychrometry and psychrometric chart based HVAC analysis and associated case study -- Chapter 11-Refrigeration Cycles and HVAC Systems Automated HVAC Systems, refrigeration cycle and associated case study -- Appendix A Solutions for end of chapter self-assessment problems -- Appendix B Steam tables -- Appendix C Common units and unit conversion factors.
Appendix D Common symbols -- Index.

Sommario/riassunto

This text provides an overview of important theory, principles, and concepts in the field of thermodynamics, making this abstract and complex subject easy to comprehend while building practical skills in the process. It enhances understanding of heat transfer, steam tables, energy concepts, power generation, psychrometry, refrigeration cycles, and more. Practical, easily accessible case studies illustrate various thermodynamics principles. Each chapter concludes with a list of questions or problems, with answers at the back of the book.