

1. Record Nr.	UNINA9910830614303321
Autore	Theodore Louis
Titolo	Thermodynamics for the practicing engineer [[electronic resource] /] / Louis Theodore, Francesco Ricci, Timothy Van Vliet
Pubbl/distr/stampa	Hoboken, : Wiley, c2009
ISBN	1-118-21631-8 1-282-27844-4 9786612278440 0-470-45159-9 0-470-45158-0
Descrizione fisica	1 online resource (434 p.)
Collana	Essential Engineering Calculations Series ; ; v.9
Altri autori (Persone)	RicciFrancesco Van VlietTimothy
Disciplina	621.402/1 621.4021 660.28427
Soggetti	Thermodynamics Energy conversion
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Thermodynamics for the Practicing Engineer; Contents; Preface; Part I INTRODUCTION; 1. Basic Calculations; 2. Process Variables; 3. Gas Laws; 4. Conservation Laws; 5. Stoichiometry; 6. The Second Law of Thermodynamics; Part II ENTHALPY EFFECTS; 7. Sensible Enthalpy Effects; 8. Latent Enthalpy Effects; 9. Enthalpy of Mixing Effects; 10. Chemical Reaction Enthalpy Effects; Part III EQUILIBRIUM THERMODYNAMICS; 11. Phase Equilibrium Principles; 12. Vapor-Liquid Equilibrium Calculations; 13. Chemical Reaction Equilibrium Principles; 14. Chemical Reaction Equilibrium Applications Part IV OTHER TOPICS15. Economic Considerations; 16. Open-Ended Problems; 17. Other ABET Topics; 18. Fuel Options; 19. Exergy: The Concept of "Quality Energy"; Appendix; I. Steam Tables; II. SI Units; III. Conversion Constants; IV. Selected Common Abbreviations; References; Index

Sommario/riassunto

This book concentrates specifically on the applications of thermodynamics, rather than the theory. It addresses both technical and pragmatic problems in the field, and covers such topics as enthalpy effects, equilibrium thermodynamics, non-ideal thermodynamics and energy conversion applications. Providing the reader with a working knowledge of the principles of thermodynamics, as well as experience in their application, it stands alone as an easy-to-follow self-teaching aid to practical applications and contains worked examples.
