

1. Record Nr.	UNINA9910777072203321
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Titolo	Cool thermodynamics [[electronic resource]] : the engineering and physics of predictive, diagnostic and optimization methods for cooling systems // Jeffrey M. Gordon and Kim Choon Ng
Pubbl/distr/stampa	Cambridge, UK, : Cambridge International Science Publishing, 2001
ISBN	1-280-50067-0 9786610500673 1-4237-2108-X 1-904602-33-9
Descrizione fisica	1 online resource (276 p.)
Altri autori (Persone)	NgKim Choon
Disciplina	697
Soggetti	Refrigerants - Thermal properties Heat pumps Thermodynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Contents; Preface; NOMENCLATURE; CONVERSION TABLE; 1. WHAT THE BOOK HAS TO OFFER AND THE INTENDED AUDIENCES: MODELING, DIAGNOSING AND OPTIMIZING COOLING DEVICES; 2. THERMODYNAMIC AND OPERATIONAL FUNDAMENTALS; 3. STANDARDS, MEASUREMENTS AND EXPERIMENTAL TEST FACILITIES FOR CHILLERS AND HEAT PUMPS; 4. ENTROPY PRODUCTION, PROCESS AVERAGE TEMPERATURE AND CHILLER PERFORMANCE: TRANSLATING IRREVERSIBILITIES INTO MEASURABLE VARIABLES; 5. THE FUNDAMENTAL CHILLER MODEL IN TERMS OF READILY-MEASURABLE VARIABLES 6. EXPERIMENTAL VALIDATION OF THE FUNDAMENTAL MODEL AND OPTIMIZATION CASE STUDIES FOR RECIPROCATING CHILLERS 7. FINITE-TIME THERMODYNAMIC OPTIMIZATION OF REAL CHILLERS; 8. COOLANT FLOW RATE AS A CONTROL VARIABLE; 9. OPTIMIZATION OF ABSORPTION SYSTEMS; 10. QUASI-EMPIRICAL THERMODYNAMIC MODEL FOR CHILLERS; 11. THE INADEQUACY OF ENDOREVERSIBLE MODELS; 12. HEAT EXCHANGER INTERNAL DISSIPATION IN CHILLER ANALYSIS AND THE ESSENTIAL ROLE OF ACCURATE PROCESS AVERAGE TEMPERATURES;

13. TEMPERATURE-ENTROPY DIAGRAMS FOR REPRESENTING REAL IRREVERSIBLE CHILLERS; 14. CAVEATS AND CHALLENGES; REFERENCES; Index

Sommario/riassunto

This book is geared toward those interested in the engineering and physics of air-conditioning and refrigeration devices (chillers). Analytic thermodynamic models are developed for a wide variety of cooling systems and a broad range of operating conditions. These models are easily implemented in the field or laboratory.