1. Record Nr. UNINA9910451105603321 Autore Oates Gordon C Titolo Aerothermodynamics of gas turbine and rocket propulsion [[electronic resource] /] / Gordon C. Oates Reston, Va., : American Institute of Aeronautics and Astronautics. Pubbl/distr/stampa c1997 **ISBN** 1-60086-134-2 1-60086-006-0 1-60119-222-3 Edizione [3rd ed.] Descrizione fisica 1 online resource (469 p.) Collana AIAA education series Disciplina 629.134/353 Soggetti Aerothermodynamics Aircraft gas-turbines Rocket engines Electronic books. 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 ""Cover""; ""Title""; ""Copyright""; ""Foreword""; ""Acknowledgments""; ""Table of Contents""; ""Preface""; ""Chapter 1. Introduction""; ""1.1 Purpose""; ""1.2 Chemical Rockets""; ""1.3 Nonchemical Rockets""; ""1.4 Airbreathing Engines""; ""1.5 Summary""; ""Chapter 2. Thermodynamics and Quasi-One-Dimensional Fluid Flows""; ""2.1 Introduction""; ""2.2 Definitions""; ""2.3 The Laws of Thermodynamics""; ""2.4 The Zeroth Law of Thermodynamics""; ""2.5 The First Law of Thermodynamics""; ""2.6 The Reversible Process""; ""2.7 Derived Properties: Enthalpy and Specific Heats"" ""2.8 The Second Law of Thermodynamics"""2.9 The Gibbs Equation""; ""2.10 The Gibbs Function and the Helmholtz Function""; ""2.11 Maxwell's Relations""; ""2.12 General Relationships between Properties""; ""2.13 The Perfect Gas""; ""2.14 Quasi-One-Dimensional Fluid Flows""; ""2.15 The First Law for a Flowing Systema€?The Control Volume""; ""2.16 The Channel Flow Equations""; ""2.17 Stagnation Properties""; ""2.18 Property Variations in Channels""; ""2.19 The Nozzle

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