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Nota di contenuto	TABLE OF CONTENTS FOR CRYOGENIC TECHNOLOGY BOOK -- CHAPTER ONE: Technology advancements and chronological development history of cryogenic technology. -- 1.0 INTRODUCTION -- CHAPTER TWO: EFFECTS OF HEAT FLOW ON HEAT EXCHANGER PERFORMANCE AND COOLER EFFICIENCY -- 2.0 INTRODUCTION -- CHAPTER THREE: Thermodynamic aspects and heat transfer capabilities of heat exchangers for high-capacity coolers -- 3.0 INTRODUCTION -- 4.0 SUMMARY -- CHAPTER FOUR: CRITICAL DESIGN ASPECTS AND PERFORMANCE CAPABILITIES OF CRYOCOOLERS AND MICROCOOLERS WITH LOW COOLING CAPACITIES -- 4.0 INTRODUCTION -- CHAPTER FIVE: PERFORMANCE REQUIREMENTS FOR MODERATE-AND HIGH-CAPACITY REFRIGERATION SYSTEMS -- 5.0 INTRODUCTION -- CHAPTER SIX: Cryocoolers and microcoolers requirements best suited for scientific research, military, and space applications -- 6.0 INTRODUCTION -- 7.0 INTRODUCTION -- CHAPTER EIGHT: REQUIREMENTS FOR CRYOGENIC MATERIALS AND ACCESSORIES NEEDED FOR VARIOUS CRYOGENIC COOLERS -- 8.0 INTRODUCTION
Sommario/riassunto	Cryogenic Technology and Applications describes the need for smaller cryo-coolers as a result of the advances in the miniaturization of electrical and optical devices and the need for cooling and conducting efficiency. Cryogenic technology deals with materials at low temperatures and the physics of their behavior at these temps. The

book demonstrates the ongoing new applications being discovered for cryo-cooled electrical and optical sensors and devices, with particular emphasis on high-end commercial applications in medical and scientific fields as well as in the aerospace and military industries. This book summarizes the important aspects of cryogenic technology critical to the design and development of refrigerators, cryo-coolers, and micro-coolers needed by various commercial, industrial, space and military systems. Cryogenic cooling plays an important role in unmanned aerial vehicle systems, infrared search and track sensors, missile warning receivers, satellite tracking systems, and a host of other commercial and military systems. * Provides an overview of the history of the development of cryogenic technology * Includes the latest information on micro-coolers for military and space applications * Offers detailed information on high-capacity cryogenic refrigerator systems used in applications such as food storage, high-power microwave and laser sensors, medical diagnostics, and infrared detectors
