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Nota di contenuto	1. Principles of Combustion -- Introduction -- Combustion Basics -- Physical Gas Laws -- Stoichiometric and Thermodynamic Considerations -- Ignition -- Flammability and Flammable Mixtures -- Gas Mixtures -- 2. Overview of Flares and Gas Flaring Practices -- General Description -- Types of Flares -- Flare System Components and Design Features -- Flare Regulations -- Flare Enforcement Actions -- Major Suppliers -- Flare Terminology -- 3. Overview of Disposal Systems and Relief Headers -- Blowdown Systems -- Disposal System Components -- Quench Drum -- Seals and the Seal Drum -- Knockout Drums -- 4. Flare Types -- Introduction -- Hydrogen Assisted Flares -- Steam Assisted Flares -- Efficiency and Smoking Flares -- 5. Remote Sensing and Monitoring -- Introduction -- Remote Sensing Dial Technology -- Experience -- 6. Practical Considerations and Emissions Calculations -- Introduction -- Sizing Considerations -- General Permit Obligations -- Monitoring System Requirements -- Marama Guidelines for Calculating Flare Emissions -- TCEQ New Source Review (NSR) Emission Calculations -- U.S. EPA's AP-42 -- Calculations Versus Measurement -- 7. Case Studies -- Introduction -- The Exxon Chalmette Refinery -- The BP Texas City Refinery -- Valero Tennessee

Sommario/riassunto

This volume tackles for the first time in decades the world's gas flaring practices, a difficult, hot-button issue of our time, whose consequences are only just beginning to be understood. The book examines both the technical and environmental aspects of gas flaring, highlights different flare designs, and presents real-world case studies illustrating the proper use of gas flaring and how to avoid polluting flaring events. The only guide of its kind, this remarkable book can help professionals in the oil and gas industry take an important step toward reducing worldwide CO<sub>2</sub> emissions.

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