Record Nr. UNINA9910453624703321 **Titolo** Handbook of liquefied natural gas / / Saeid Mokhatab, gas processing consultant, Canada [and three others] Pubbl/distr/stampa Amsterdam:,: Elsevier/Gulf Professional Publishing,, 2014 **ISBN** 0-12-809996-8 0-12-404645-2 Descrizione fisica 1 online resource (617 p.) Altri autori (Persone) MokhatabSaeid 617 Disciplina Soggetti Liquefied natural gas industry Liquefied natural gas Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Front Cover; Handbook of Liquefied Natural Gas; Copyright; Dedication; Nota di contenuto Contents: Authors' Biographical Sketches: Contributors: Preface: Endorsements; Chapter 1 - LNG Fundamentals; 1.1 Introduction; 1.2 Monetizing stranded gas; 1.3 LNG characteristics; 1.4 Traditional LNG supply chain; 1.5 Offshore LNG supply chain; 1.6 LNG environmental aspects; 1.7 Costs and economic implications of LNG facilities; 1.8 LNG contracts and project development; 1.9 LNG trade; References; Chapter 2 - Gas Conditioning and NGL Recovery Technologies; 2.1 Introduction; 2.2 LNG production plants; References Chapter 3 - Natural Gas Liquefaction 3.1 Introduction; 3.2 Natural gas liquefaction technology; 3.3 Offshore natural gas liquefaction; References; Chapter 4 - Energy and Exergy Analyses of Natural Gas Liquefaction Cycles; 4.1 Introduction; 4.2 Refrigeration/liquefaction cycle principles: 4.3 Refrigerant selections: 4.4 Fundamentals of energy and exergy analysis; 4.5 Energy and exergy analyses of natural gas

gas liquefaction cycle enhancement types

liquefaction cycles; References; Chapter 5 - Natural Gas Liquefaction Cycle Enhancements and Optimization; 5.1 Introduction; 5.2 Natural

5.3 Energy consumption enhancement options by recovering process losses and waste heat 5.4 Brief introduction to optimization; 5.5 Liquefaction cycle optimization; 5.6 Driver cycle optimization; 5.7

Mobile LNG plants optimal design challenges; References; Chapter 6 -Process Control and Automation of LNG Plants and Import Terminals: 6.1 Introduction; 6.2 Objectives of LNG plant automation; 6.3 LNG plant process control/automation development and functionalities; 6.4 Process control of key units in LNG plants; 6.5 Advanced process control and optimization of LNG plants 6.6 Process control and automation in LNG import terminals 6.7 Case study 1: advanced process control for APCI C3MR LNG process; References; Chapter 7 - LNG Plant and Regasification Terminal Operations; 7.1 Introduction; 7.2 LNG plant normal operation; 7.3 General startup sequence; 7.4 LNG plant startup; 7.5 LNG plant shutdown; 7.6 Performance and acceptance test; 7.7 LNG regasification terminal normal operation; 7.8 LNG regasification terminal startup; 7.9 LNG regasification terminal shutdown; References; Chapter 8 -Dynamic Simulation and Optimization of LNG Plants and Import **Terminals**

8.1 Introduction 8.2 Life cycle dynamic simulation of LNG plants and import terminals; 8.3 Dynamic modeling of LNG plants; 8.4 Applications of dynamic simulation in LNG; 8.5 Dynamic simulation of LNG import terminals; References; Chapter 9 - LNG Safety and Security Aspects; 9.1 Introduction; 9.2 Hazards associated with LNG plants; 9.3 Safety features of LNG facilities; 9.4 LNG risk analysis and controls; 9.5 LNG security; References; Chapter 10 - Advances and Innovations in LNG Industry; 10.1 Introduction; 10.2 Innovations in LNG liquefaction; 10.3 LNG regasification; References Chapter 11 - LNG Project Management

Sommario/riassunto

Liquefied natural gas (LNG) is a commercially attractive phase of the commodity that facilitates the efficient handling and transportation of natural gas around the world. The LNG industry, using technologies proven over decades of development, continues to expand its markets, diversify its supply chains and increase its share of the global natural gas trade. The Handbook of Liquefied Natural Gas is a timely book as the industry is currently developing new large sources of supply and the technologies have evolved in recent years to enable offshore infrastructure to develop and