1. Record Nr. UNINA9910811329003321 Autore Bahadori Alireza **Titolo** Natural gas processing: technology and engineering design / / Alireza Bahadori Waltham, Massachusetts; ; Kidlington, Oxford:,: Elsevier,, 2014 Pubbl/distr/stampa ©2014 **ISBN** 1-78402-765-0 0-12-420204-7 Edizione [1st edition] Descrizione fisica 1 online resource (893 p.) Disciplina 665.7/3 Natural gas Soggetti Chemical processes Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Front Cover; Natural Gas Processing; Copyright; Dedication; Natural Gas Nota di contenuto Processing; Contents; About the Author; Preface; Chapter 1 - Overview of Natural Gas Resources; 1.1 The formation of natural gas; 1.2 Conventional natural gas resources; 1.3 Gas reservoir fluids; 1.4 Unconventional natural gas resources; 1.5 Hydraulic fracturing; Further reading; Chapter 2 - Natural Gas Properties; 2.1 Fluid distribution in reservoir; 2.2 Phase behavior of hydrocarbon systems; 2.3 Pressurevolume-temperature properties of hydrocarbon fluids; 2.4 Gas compressibility factor; 2.5 Equation of state 2.6 Gas specific gravity2.7 Gas density; 2.8 Specific volume; 2.9 Isothermal compressibility of gases; 2.10 Gas formation volume factor; 2.11 Standard volume; 2.12 Acentric factor; 2.13 Viscosity; 2.14 Thermal conductivity: 2.15 Gross heating value of natural gases: References; Further reading; Chapter 3 - Single-phase and Multiphase Flow in Natural Gas Production Systems; 3.1 Basic fluid flow theory; 3.2 Process pipe sizing for plants located onshore single phase: 3.3 Process pipe sizing for plants located offshore; 3.4 Transmission pipelines; 3.5 Two-phase mixture properties 3.6 Two-phase flow pressure drop3.7 General aspects in design of

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## Sommario/riassunto

Natural gas is considered the dominant worldwide bridge between fossil fuels of today and future resources of tomorrow. Thanks to the recent shale boom in North America, natural gas is in a surplus and quickly becoming a major international commodity. Stay current with conventional and now unconventional gas standards and procedures with Natural Gas Processing: Technology and Engineering Design. Covering the entire natural gas process, Bahadori's must-have handbook provides everything you need to know about natural gas, including: Fundamental background on natural gas pro