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| Autore                  | Mokhatab Saeid   |
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| Altri autori (Persone)  | PoeWilliam A<br>SpeightJames G   |
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| Nota di contenuto       | Front Cover; HANDBOOK OF NATURAL GAS TRANSMISSION AND PROCESSING; Copyright Page; CONTRIBUTORS; CONTENTS; FOREWORD; PREFACE; ACKNOWLEDGMENTS; ENDORSEMENTS; AUTHORS BIOGRAPHICAL SKETCHES; Chapter 1 - NATURAL GAS FUNDAMENTAL; 1.1 INTRODUCTION; 1.2 NATURAL GAS HISTORY; 1.3 NATURAL GAS ORIGIN AND COMPOSITION; 1.4 GAS SOURCES; 1.5 NATURAL GAS PHASE BEHAVIOR; 1.6 NATURAL GAS PROPERTIES; 1.7 QUALITY; 1.8 TRANSPORTATION; REFERENCES; Chapter 2 - NATURAL GAS ENERGY PRICING; 2.1 INTRODUCTION; 2.2 ENERGY PRICING, SUPPLY, AND DEMAND; 2.3 SUSTAINABILITY AND THE INCREASING FASCINATION WITH NATURAL GAS<br>2.4 IS NATURAL GAS ALWAYS ""NONRENEWABLE?""2.5 U.S. NATURAL GAS: PRICING, MARKETS, RISK MANAGEMENT, AND SUPPLY; 2.6 NATURAL GAS IN EURASIA: THE SPECIAL POSITION OF POST- SOVIET RUSSIA; 2.7 LOOKING TO NATURE FOR A NEW MODEL; REFERENCES; Chapter 3 - RAW GAS TRANSMISSION; 3.1 INTRODUCTION; 3.2 MULTIPHASE FLOW TERMINOLOGY; 3.3 MULTIPHASE FLOW REGIMES; 3.4 |

CALCULATING MULTIPHASE FLOW PRESSURE GRADIENTS; 3.5 MULTIPHASE FLOW IN GAS/CONDENSATE PIPELINES; 3.6 TEMPERATURE PROFILE OF MULTIPHASE PIPELINES; 3.7 VELOCITY CRITERIA FOR SIZING MULTIPHASE PIPELINES; 3.8 MULTIPHASE FLOW ASSURANCE 3.9 MULTIPHASE PIPELINE OPERATIONS REFERENCES; Chapter 4 - BASIC CONCEPTS OF NATURAL GAS PROCESSING; 4.1 INTRODUCTION; 4.2 PROCESS MODULES; 4.3 SCOPE OF NATURAL GAS PROCESSING; REFERENCES; Chapter 5 - PHASE SEPARATION; 5.1 INTRODUCTION; 5.2 GRAVITY SEPARATORS; 5.3 MULTISTAGE SEPARATION; 5.4 CENTRIFUGAL SEPARATORS; 5.5 TWISTER SUPERSONIC SEPARATOR; 5.6 SLUG CATCHERS; 5.7 HIGH-EFFICIENCY LIQUID-GAS COALESCERS; 5.8 HIGH-EFFICIENCY LIQUID-LIQUID COALESCERS; REFERENCES; Chapter 6 - CONDENSATE STABILIZATION; 6.1 INTRODUCTION; 6.2 STABILIZATION PROCESSES; 6.3 CONDENSATE STORAGE; REFERENCES Chapter 7 - ACID GAS TREATING 7.1 INTRODUCTION; 7.2 ACID GAS REMOVAL PROCESSES; 7.3 SULFUR RECOVERY PROCESSES; REFERENCES; Chapter 8 - NATURAL GAS COMPRESSION; 8.1 INTRODUCTION; 8.2 RECIPROCATING COMPRESSORS; 8.3 CENTRIFUGAL COMPRESSORS; 8.4 COMPARISON BETWEEN COMPRESSORS; 8.5 COMPRESSOR SELECTION; 8.6 THERMODYNAMICS OF GAS COMPRESSION; 8.7 REAL GAS BEHAVIOR AND EQUATIONS OF STATE; 8.8 COMPRESSION RATIO; 8.9 COMPRESSION DESIGN; 8.10 COMPRESSOR CONTROL; 8.11 COMPRESSOR PERFORMANCE MAPS; REFERENCES; Chapter 9 - NATURAL GAS DEHYDRATION; 9.1 INTRODUCTION; 9.2 WATER CONTENT DETERMINATION 9.3 GLYCOL DEHYDRATION 9.4 SOLID DESICCANT DEHYDRATION; REFERENCES; Chapter 10 - NATURAL GAS LIQUIDS RECOVERY; 10.1 INTRODUCTION; 10.2 NGL RECOVERY PROCESSES; 10.3 NGL FRACTIONATION; 10.4 GASOLINE AND LPG TREATING; REFERENCES; Chapter 11 - SALES GAS TRANSMISSION; 11.1 INTRODUCTION; 11.2 GAS FLOW FUNDAMENTALS; 11.3 PREDICTING GAS TEMPERATURE PROFILE; 11.4 TRANSIENT FLOW IN GAS TRANSMISSION PIPELINES; 11.5 COMPRESSOR STATIONS AND ASSOCIATED PIPELINE INSTALLATIONS; 11.6 DESIGN CONSIDERATIONS OF SALES GAS PIPELINES; 11.7 PIPELINE OPERATIONS; REFERENCES Chapter 12 - GAS PROCESSING PLANT CONTROLS AND AUTOMATION

#### Sommario/riassunto

Handbook of Natural Gas Transmission and Processing gives engineers and managers complete coverage of natural gas transmission and processing in the most rapidly growing sector to the petroleum industry. The authors provide a unique discussion of new technologies that are energy efficient and environmentally appealing at the same time. It is an invaluable reference on natural gas engineering and the latest techniques for all engineers and managers moving to natural gas processing as well as those currently working on natural gas projects.\* Provides practicing engineers critical inf

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| Descrizione fisica      | 1 online resource (xii, 171 pages) : illustrations  |
| Altri autori (Persone)  | AlessioHelaine M<br>HagermanAnn E   |
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| Soggetti                | Oxidative stress<br>Exercise - Physiological aspects<br>Aging - Physiological aspects   |
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| Nota di contenuto       | 1. Chemistry of reactive oxygen species and antioxidants / D.C. Close and A.E. Hagerman 2. Oxidative stress in plants and animals / D.C. Close and A.E. Hagerman 3. The exercise continuum / R.L. Wiley 4. Oxidative stress and muscle size, type, and action / H.M. Alessio 5. Oxidative stress across the exercise continuum / H.M. Alessio 6. Oxidative stress and antioxidant defense: Effects of aging and exercise / L.L. Ji 7. Muscle, oxidative stress and aging / J.S. Moylan, W.J. Durham, and M.B. Reid 8. Aging, exercise, antioxidants, and cardioprotection / J. Quindry and S. Powers 9. Genetic expressions: oxidative stress, exercise, and aging / N.B. Schweitzer and H.M. Alessio |
| Sommario/riassunto      | This book brings together some of the leading researchers in the actively investigated field of oxidative stress, an area of study which is of importance to human health and disease. It examines oxidative stress in a variety of models, at rest and after exercise, in young and old. Key concepts of oxidative stress, exercise and aging are presented in clear and easy-to-understand terms. Oxidative stress in different   |

types of exercises - isometric, isotonic and sports - is explained in detail, with several chapters focusing on acute and chronic adaptations of skeletal muscles following both aerobic and non-aerobic exercises. The book includes current knowledge of the underlying mechanisms influencing health and disease processes associated with oxidative stress.

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