Recent changes in the codes for building pipelines has led to a boom in the production of new materials that can be used in flexible pipes. With the use of polymers, steel, and other new materials and variations on existing materials, the construction and, therefore, the installation and operation of flexible pipes is changing and being improved upon all over the world. The authors of this work have written numerous books and papers on these subjects and are some of the most influential authors on flexible pipes in the world, contributing much of the literature on this subject to the industry. This new volume is a presentation of some of the most cutting-edge technological advances in technical publishing. This is the most comprehensive and in-depth book on this subject, covering not just the various materials and their aspects that make them different, but every process that goes into their installation, operation, and design. The thirty-six chapters, divided up into four different parts, have had not just the authors of this text but literally dozens of other engineers who are some of the world’s leading scientists in this area contribute to the work. This is the future of pipelines, and it is an important breakthrough. A must-have for the veteran engineer and student alike, this volume is an important new advancement in the energy industry, a strong link in the chain of the world’s energy production.
of offshore structure, the design procedure for the fixed offshore structure, nonlinear analysis (Push over) as a new technique to design and assess the existing structure, and more. With this book in hand, engineers will have the most up-to-date methods for performing a structural lifecycle analysis, implementing maintenance plans for topsides and jackets and using non-destructive testing. Provides a one-stop guide to offshore structure design and analysis Presents easy-to-understand methods for structural lifecycle analysis Contains expert advice for designing offshore platforms for all types of environments

**Subsea Engineering Handbook**

Progress in the Analysis and Design of Marine Structures collects the contributions presented at MARSTRUCT 2017, the 6th International Conference on Marine Structures (Lisbon, Portugal, 8-10 May 2017). The MARSTRUCT series of Conferences started in Glasgow, UK in 2007, the second event of the series having taken place in Lisbon, Portugal in March 2009, the third in Hamburg, Germany in March 2011, the fourth in Espoo, Finland in March 2013, and the fifth in Southampton, UK in March 2015. This Conference series deals with Ship and Offshore Structures, addressing topics in the areas of: - Methods and Tools for Loads and Load Effects - Methods and Tools for Strength Assessment - Experimental Analysis of Structures - Materials and Fabrication of Structures - Methods and Tools for Structural Design and Optimisation, and - Structural Reliability, Safety and Environmental Protection Progress in the Analysis and Design of Marine Structures is essential reading for academics, engineers and all professionals involved in the design of marine and offshore structures.

**Beam Theory for Subsea Pipelines**

Introducing a new practical approach within the field of applied mechanics developed to solve beam strength and bending problems using classical beam theory and beam modeling, this outstanding new volume offers the engineer, scientist, or student a revolutionary new approach to subsea pipeline design. Integrating use of the Mathematica program into these models and designs, the engineer can utilize this unique approach to build stronger, more efficient and less costly subsea pipelines, a very important phase of the world's energy infrastructure. Significant advances have been achieved in implementation of the applied beam theory in various engineering design technologies over the last few decades, and the implementation of this theory also takes an important place within the practical area of re-qualification and reassessment for onshore and offshore pipeline engineering. A general strategy of applying beam theory into the design procedure of subsea pipelines has been developed and already incorporated into the ISO guidelines for reliability-based limit state design of pipelines. This work is founded on these significant advances. The intention of the book is to provide the theory, research, and practical applications that can be used for educational purposes by personnel working in offshore pipeline integrity and engineering students. A must-have for the veteran engineer and student alike, this volume is an important new advancement in the energy industry, a strong link in the chain of the world's energy production.

**Corrosion Control for Offshore Structures**
Marine Structural Design, Second Edition, is a wide-ranging, practical guide to marine structural analysis and design, describing in detail the application of modern structural engineering principles to marine and offshore structures. Organized in five parts, the book covers basic structural design principles, strength, fatigue and fracture, and reliability and risk assessment, providing all the knowledge needed for limit-state design and reassessment of existing structures. Updates to this edition include new chapters on structural health monitoring and risk-based decision-making, arctic marine structural development, and the addition of new LNG ship topics, including composite materials and structures, uncertainty analysis, and green ship concepts. Provides the structural design principles, background theory, and know-how needed for marine and offshore structural design by analysis Covers strength, fatigue and fracture, reliability, and risk assessment together in one resource, emphasizing practical considerations and applications Updates to this edition include new chapters on structural health monitoring and risk-based decision making, and new content on arctic marine structural design

Subsea Pipeline Design and Engineering

The Offshore Pipeline Construction Industry: Activity Modeling and Cost Estimation in the United States Gulf of Mexico presents the latest technical concepts and economic calculations, helping engineers make better business decisions. The book covers flow assurance, development strategies on pipeline requirements and the construction service side with a global perspective. In addition, it focuses on one of the most underdeveloped, promising assets - the Gulf of Mexico. Pipeline construction and decommissioning estimation methods are examined with reliable data presented. A final section covers trends for oil, gas, bulk oil, bulk gas, service and umbilical pipelines for installation and decommissioning using correlation models. This book delivers a much-needed tool for the pipeline engineer to better understand the economical choices and alternatives to designing, constructing, and operating today’s offshore pipelines. Built with construction and decommissioning decision tools supported by reliable data and case studies. Organized by parts, including a section devoted to Gulf of Mexico statistics and estimation methods Helps readers gain practical knowledge on strategies and cost models from a global pipeline perspective, including environmental and mitigation considerations

Dynamic Analysis and Design of Offshore Structures

• Updated edition of a best-selling title • Author brings 25 years experience to the work • Addresses the key issues of economy and environment. Marine pipelines for the transportation of oil and gas have become a safe and reliable way to exploit the valuable resources below the world’s seas and oceans. The design of these pipelines is a relatively new technology and continues to evolve in its quest to reduce costs and minimise the effect on the environment. With over 25 years experience, Professor Yong Bai has been able to assimilate the essence of the applied mechanics aspects of offshore pipeline system design in a form of value to students and designers alike. It represents an excellent source of up to date practices and knowledge to help equip those who wish to be part of the exciting future of this industry.

Advanced Analysis and Design of Subsea Pipelines
Taking a big-picture approach, Piping and Pipeline Engineering: Design, Construction, Maintenance, Integrity, and Repair elucidates the fundamental steps to any successful piping and pipeline engineering project, whether it is routine maintenance or a new multi-million dollar project. The author explores the qualitative details, calculations, and t

**Offshore Pipelines**

Dr C P Ellinas Advanced Mechanics & Engineering Ltd Major advances have been achieved in recent years in subsea pipeline design and installation. Inspection, maintenance and repair have also received much attention. The development of marginal fields has brought with it special problems, which have necessitated novel methods and solutions. In the meanwhile interest in the development of deepwater fields continues with the development of new technology. This Conference has placed emphasis in addressing developments in pipeline technology under four main headings: pipeline/seabed interaction; flexible pipelines; pipeline design, fabrication and installation; deepwater applications. Advances in North Sea technology over the last few years have been concerned mostly with marginal fields, small diameter pipelines and new materials, which are well covered in the first three topics. Economic development of marginal fields requires processing of oil and gas to take place not at the wellhead but at existing facilities, usually some distance away. Hydrocarbons are thus often transported at high pressure and temperature in small diameter pipelines, which need to be protected through trenching. However, such operational practice has brought to the fore a problem that in the past was of little concern namely, upheaval buckling.

**Subsea Pipelines and Risers**

**Pipelines and Risers**

The offshore industry continues to drive the oil and gas market into deeper drilling depths, more advanced subsea systems, and cross into multiple disciplines to further technology and equipment. Engineers and managers have learned that in order to keep up with the evolving market, they must have an all-inclusive solution reference. Subsea Engineering Handbook, Second Edition remains the go-to source for everything related to offshore oil and gas engineering. Enhanced with new information spanning control systems, equipment QRA, electric tree structures, and manifold designs, this reference is still the one product engineers rely on to understand all components of subsea technology. Packed with new chapters on subsea processing and boosting equipment as well as coverage on newer valves and actuators, this handbook explains subsea challenges and discussions in a well-organized manner for both new and veteran engineers to utilize throughout their careers. Subsea Engineering Handbook, Second Edition remains the critical road map to understand all subsea equipment and technology. Gain access to the entire spectrum of subsea engineering, including the very latest on equipment, safety, and flow assurance systems Sharpen your knowledge with new content coverage on subsea valves and actuators, multiphase flow loop design, tree and manifold design as well as subsea control Practice and learn with new real-world test examples and case studies
Advances in Subsea Pipeline Engineering and Technology

Protection of coastal waters from direct pollution by coastal cities is a vital task in preserving marine ecosystems and promoting human health. This book, edited by two leading experts on wastewater management for coastal cities, delves deeply into the ecological and oceanographic fundamentals that are essential for understanding of what happens to wastes discharged into the nearshore marine environment. It explains the requirements for rational engineering design and operation of the physical and institutional components of coastal city wastewater management, and it provides guidelines for hydraulic design, ocean outfall construction, monitoring, cost recovery, and other economic aspects. Case studies are included, drawn from the editors' worldwide field experience.

Handbook of Offshore Engineering

A variable game changer for those companies operating in hostile, corrosive marine environments, Corrosion Control for Offshore Structures provides critical corrosion control tips and techniques that will prolong structural life while saving millions in cost. In this book, Ramesh Singh explains the ABCs of prolonging structural life of platforms and pipelines while reducing cost and decreasing the risk of failure. Corrosion Control for Offshore Structures places major emphasis on the popular use of cathodic protection (CP) combined with high efficiency coating to prevent subsea corrosion. This reference begins with the fundamental science of corrosion and structures and then moves on to cover more advanced topics such as cathodic protection, coating as corrosion prevention using mill applied coatings, field applications, and the advantages and limitations of some common coating systems. In addition, the author provides expert insight on a number of NACE and DNV standards and recommended practices as well as ISO and Standard and Test Methods. Packed with tables, charts and case studies, Corrosion Control for Offshore Structures is a valuable guide to offshore corrosion control both in terms of its theory and application. Prolong the structural life of your offshore platforms and pipelines Understand critical topics such as cathodic protection and coating as corrosion prevention with mill applied coatings Gain expert insight on a number of NACE and DNV standards and recommended practices as well as ISO and Standard Test Methods.

Marine Structural Design

The technology, processes, materials, and theories surrounding pipeline construction, application, and troubleshooting are constantly changing, and this new series, Advances in Pipes and Pipelines, has been created to meet the needs of engineers and scientists to keep them up to date and informed of all of these advances. This second volume in the series focuses on flexible pipelines, risers, and umbilicals, offering the engineer the most thorough coverage of the state-of-the-art available. The authors of this work have written numerous books and papers on these subjects and are some of the most influential authors on flexible pipes in the world, contributing much of the literature on this subject to the industry. This new volume is a presentation of some of the most cutting-edge technological advances in technical publishing. The first volume in this series, published by Wiley-Scrivener, is Flexible Pipes, available at www.wiley.com. Laying the foundation for the series, it is a groundbreaking work, written by some of the world's foremost authorities on pipes and pipelines. Continuing in this series, the editors have compiled the second volume, equally as groundbreaking, expanding the
scope to pipelines, risers, and umbilicals. This is the most comprehensive and in-depth series on pipelines, covering not just the various materials and their aspects that make them different, but every process that goes into their installation, operation, and design. This is the future of pipelines, and it is an important breakthrough. A must-have for the veteran engineer and student alike, this volume is an important new advancement in the energy industry, a strong link in the chain of the world's energy production.

**Subsea Pipelines and Risers**

This book introduces readers to various types of offshore platform geometries. It addresses the various environmental loads encountered by these structures, and provides detailed descriptions of the fundamentals of structural dynamics in a classroom style, helping readers estimate damping in offshore structures and grasp these aspects’ applications in preliminary analysis and design. Basic concepts of structural dynamics are emphasized through simple illustrative examples and exercises. Design methodologies and guidelines, which are FORM based concepts, are explained through a selection of applied sample structures. Each chapter also features tutorials and exercises for self-learning. A dedicated chapter on stochastic dynamics helps students to extend the basic concepts of structural dynamics to this advanced domain of research. Hydrodynamic response of offshore structures with perforated members is one of the most recent research applications, and has proven to be one of the most effective means of retrofitting offshore structures. In addition, the book integrates the concepts of structural dynamics with the FORM-evolved design of offshore structures, offering a unique approach. This new edition is divided into seven chapters, each of which has been updated. Each chapter also includes a section on frequently asked Questions and Answers (Q&A), which enhances understanding of this complex subject through easy and self-explanatory text. Furthermore, the book presents valuable content with respect to new and recent research carried out by the author in structural dynamics. All numeric examples have been re-checked with more additional explanations. New exercises have been added to improve understanding of the subject matter. Computer coding is also included (wherever possible) to aid computer-based learning of the contents of the book. The book can serve as a textbook for senior undergraduate and graduate courses in civil, structural, applied mechanics, mechanical, aerospace, naval architecture and ocean engineering programs. The book can also serve as a text for professional learning and development programs or as a guide for practicing and consulting offshore structural engineers. The contents of this book will be useful to graduate students, researchers, and professionals alike.

**Subsea Pipeline Integrity and Risk Management**

Treats the subject of local sour around different kinds of marine structures, exposed to waves and/or currents.

**Offshore Pipelines**

This comprehensive handbook on submarine pipeline systems covers a broad spectrum of topics from planning and site investigations, procurement and design, to installation and commissioning. It considers guidelines for the choice of design parameters, calculation methods and construction procedures. It is based on limit state design with partial safety coefficients.
Subsea Pipeline Design, Analysis, and Installation

A comprehensive materials science book on the design, analysis, and performance of composite materials (CM) in oil, gas, water and wastewater pipe applications.

Improving the Safety of Marine Pipelines

Aspect ’94

The development of oil and gas fields offshore requires specialized pipeline equipment. The structures must be strong enough to withstand the harshest environments, and ensure that production is not interrupted and remains economically feasible. However, recent events in the Gulf of Mexico have placed a new importance on maintenance and reliability. A new section; Condition Based Maintenance (CBM), introduces the subject of maintenance, written by Tian Ran Lin, Queensland University of Technology, and Yong Sun, CSIRO Earth Science and Resource Engineering. Two of the main objectives of CBM is maximizing reliability while preventing major or minor equipment malfunction and minimizing maintenance costs. In this new section, the authors deal with the multi-objective condition based maintenance optimization problem. CBM provides two major advantages: (1) an efficient approach for weighting maintenance objectives, and (2) a method for specifying physical methods for achieving those objectives. Maintenance cost and reliability objectives are calculated based on proportional hazards model and a control limit CBM replacement policy. Written primarily for engineers and management personnel working on offshore and deepwater oil and gas pipelines, this book covers the fundamentals needed to design, Install, and commission pipeline projects. This new section along with a thorough update of the existing chapters represents a 30% increase in information over the previous edition. Covers offshore maintenance and maintenance support system Provides the fundamentals needed to design, Install, and commission pipeline project Methods and tools to deliver cost effective maintenance cost and system reliability New section on Condition-Based Maintenance written by Tian Ran Lin, Queensland University of Technology, and Yong Sun, CSIRO Earth Science and Resource Engineering (yong.sun@csiro.au)

Bolting Reliability for Offshore Oil and Natural Gas Operations

Marine pipelines for the transportation of oil and gas have become a safe and reliable part of the expanding infrastructure put in place for the development of the valuable resources below the world's seas and oceans. The design of these pipelines is a relatively new technology and continues to evolve as the design of more cost effective pipelines becomes a priority and applications move into deeper waters and more hostile environments. This updated edition of a best selling title provides the reader with a scope and depth of detail related to the design of offshore pipelines and risers not seen before in a textbook format. With over 25 years experience, Professor Yong Bai has been able to assimilate the essence of the applied mechanics aspects of offshore pipeline system design in a form of value to students and designers alike. It represents an excellent source of up to date practices and
knowledge to help equip those who wish to be part of the exciting future of this industry.

**Composite Materials in Piping Applications**

Subsea production systems, overview of subsea engineering, subsea field development, subsea distribution system. Flow assurance and system engineering. Subsea structure and equipment. Subsea umbilical, risers, and flowlines.

**Progress in the Analysis and Design of Marine Structures**

Wax Deposition: Experimental Characterizations, Theoretical Modeling, and Field Practices covers the entire spectrum of knowledge on wax deposition. The book delivers a detailed description of the thermodynamic and transport theories for wax deposition modeling as well as a comprehensive review of laboratory testing for the establishment of appropriate field control strategies. Offering valuable insight from academic research and the flow assurance industry, this balanced text: Discusses the background of wax deposition, including the cause of the phenomenon, the magnitude of the problem, and its impact on petroleum production Introduces laboratory techniques and theoretical models to measure and predict key parameters of wax precipitation, such as the wax appearance temperature and the wax precipitation curve Explains how to conduct and interpret laboratory experiments to benchmark different wax deposition models, to better understand wax deposition behaviors, and to predict wax deposit growth for the field Presents various models for wax deposition, analyzing the advantages and disadvantages of each and evaluating the differences between the assumptions used Provides numerous examples of how field management strategies for wax deposition can be established based on laboratory testing and modeling work Wax Deposition: Experimental Characterizations, Theoretical Modeling, and Field aids flow assurance engineers in identifying the severity and controlling the problem of wax deposition. The book also shows students and researchers how fundamental principles of thermodynamics, heat, and mass transfer can be applied to solve a problem common to the petroleum industry.

**Offshore Structures**

As deepwater wells are drilled to greater depths, pipeline engineers and designers are confronted with new problems such as water depth, weather conditions, ocean currents, equipment reliability, and well accessibility. Subsea Pipeline Design, Analysis, and Installation is based on the authors' 30 years of experience in offshore. The authors provide rigorous coverage of the entire spectrum of subjects in the discipline, from pipe installation and routing selection and planning to design, construction, and installation of pipelines in some of the harshest underwater environments around the world. All-inclusive, this must-have handbook covers the latest breakthroughs in subjects such as corrosion prevention, pipeline inspection, and welding, while offering an easy-to-understand guide to new design codes currently followed in the United States, United Kingdom, Norway, and other countries. Gain expert coverage of international design codes Understand how to design pipelines and risers for today's deepwater oil and gas Master critical equipment such as subsea control systems and pressure piping.
Oil and Gas Pipelines

The Planning Committee on Connector Reliability for Offshore Oil and Natural Gas Operations held the Workshop on Bolting Reliability for Offshore Oil and Natural Gas Operations in Washington, D.C., on April 10-11, 2017. The workshop was designed to advance and develop a comprehensive awareness of the outstanding issues associated with fastener material failures and equipment reliability issues. Speakers and participants were also encouraged to discuss possible paths for ameliorating risks associated with fasteners used for subsea critical equipment in oil and gas operations. This publication summarizes the presentations and discussions from the workshop.

Wax Deposition

Offshore oil and gas production was conducted throughout the entire 20th century, but the industry’s modern importance and vibrancy did not start until the early 1970s, when the North Sea became a major producer. Since then, the expansion of the offshore oil industry has been continuous and rapid. Pipelines, and more generally long tubular structures, are major oil and gas industry tools used in exploration, drilling, production, and transmission. Installing and operating tubular structures in deep waters places unique demands on them. Technical challenges within the field have spawned significant research and development efforts in a broad range of areas. Volume I addresses problems of buckling and collapse of long inelastic cylinders under various loads encountered in the offshore arena. Several of the solutions are also directly applicable to land pipelines. The approach of Mechanics of Offshore Pipelines is problem oriented. The background of each problem and scenario are first outlined and each discussion finishes with design recommendations. * New and classical problems addressed - investigated through a combination of experiments and analysis * Each chapter deals with a specific mechanical problem that is analyzed independently * The fundamental nature of the problems makes them also applicable to other fields, including tubular components in nuclear reactors and power plants, aerospace structures, automotive and civil engineering structures, naval vehicles and structures

Mechanics of Offshore Pipelines

Subsea Pipeline Engineering

The Mechanics of Scour in the Marine Environment

Frontiers in Offshore Geotechnics II comprises the Proceedings of the Second International Symposium on Frontiers in Offshore Geotechnics (ISFOG), organised by the Centre for Offshore Foundation Systems (COFS) and held at the University of Western Australia (UWA), Perth from 8 10 November 2010. The volume addresses current and emerging challenges
Flexible Pipes

Computational Rheology for Pipeline and Annular Flow develops and applies modern analytical and computational finite difference methods for solving flow problems in drilling and production. It also provides valuable insights into flow assurance analysis in subsea pipeline design. Using modeling techniques that simulate the motion of non-Newtonian fluids, e.g., power law, Bingham plastic, and Herschel-Bulkley flows, this book presents proven annular flow methodologies for cuttings transport and stuck pipe analysis based on detailed experimental data obtained from highly deviated and horizontal wells. These methods are applied for highly eccentric borehole geometries to the design of pipeline bundles in subsea applications, where such annular configurations arise in velocity and thermal modeling applications. Also covered extensively are the design and modeling of pipelines having non-circular cross-sections, where deviations from ideal circular geometries arise from plugging due to wax deposition and the presence of hydrates and asphaltenes. As in the case of annular flows, the new algorithms apply to fluids with general rheological description; for example, the methods show very precisely how flow rate and pressure gradient vary nonlinearly in practical problem situations. Provides valuable insights into flow assurance analysis. Contains new algorithms on annular flows and fluids with general rheological descriptions supply solutions to practical problems.

Piping and Pipeline Engineering

Offshore Pipeline Design, Analysis, and Methods

The safety of the U.S. undersea pipeline system is a major national interest and concern, whether the concern focuses on risk to human life or the potential for environmental pollution and damage. Focusing primarily on the Gulf of Mexico system, this book reviews historical examples of pipeline failure, assesses the potential for future pipeline failures and the means of mitigating them, and considers the efficacy of existing safety systems and inspection procedures. It also identifies alternatives for improvements in the regulatory framework and in lawmaking.

BASIC Pipeline Engineering Manual

Edited by the Society for Underwater Technology, this text covers advances in subsea pipeline engineering and technology. Topics covered include changes in the industry, high pressure/high temperature, design, construction/installation and operations and maintenance.

Computational Rheology for Pipeline and Annular Flow

A comprehensive and detailed reference guide on the integrity and safety of oil and gas pipelines, both onshore and offshore. Covers a wide variety of topics, including design, pipe manufacture, pipeline welding, human factors, residual stresses, mechanical damage, fracture and corrosion, protection,
inspection and monitoring, pipeline cleaning, direct assessment, repair, risk management, and abandonment Links modern and vintage practices to help integrity engineers better understand their system and apply up-to-date technology to older infrastructure. Includes case histories with examples of solutions to complex problems related to pipeline integrity. Includes chapters on stress-based and strain-based design, the latter being a novel type of design that has only recently been investigated by designer firms and regulators. Provides information to help those who are responsible to establish procedures for ensuring pipeline integrity and safety.

Deepwater Flexible Risers and Pipelines

Offshore Pipelines covers the full scope of pipeline development from pipeline designing, installing, and testing to operating. It gathers the authors' experiences gained through years of designing, installing, testing, and operating submarine pipelines. The aim is to provide engineers and management personnel a guideline to achieve cost-effective management in their offshore and deepwater pipeline development and operations. The book is organized into three parts. Part I presents design practices used in developing submarine oil and gas pipelines and risers. Contents of this part include selection of pipe size, coating, and insulation. Part II provides guidelines for pipeline installations. It focuses on controlling bending stresses and pipe stability during laying pipelines. Part III deals with problems that occur during pipeline operations. Topics covered include pipeline testing and commissioning, flow assurance engineering, and pigging operations. This book is written primarily for new and experienced engineers and management personnel who work on oil and gas pipelines in offshore and deepwater. It can also be used as a reference for college students of undergraduate and graduate levels in Ocean Engineering, Mechanical Engineering, and Petroleum Engineering. * Pipeline design engineers will learn how to design low-cost pipelines allowing long-term operability and safety. * Pipeline operation engineers and management personnel will learn how to operate their pipeline systems in a cost effective manner. * Deepwater pipelining is a new technology developed in the past ten years and growing quickly.

Offshore Pipeline Design Elements

The preparation of this book was motivated by recent developments in research and engineering and new design codes. It aims to educate more pipeline engineers and provide materials for on-job training on the use of new design codes and guides.

Wastewater Management for Coastal Cities

Authored by two of the world's most respected authorities in subsea pipeline engineering, this definitive reference book covers the entire spectrum of subjects in the discipline, from route selection and planning to design, construction, installation, materials and corrosion, inspection, welding, repair, risk assessment, and applicable design codes and standards. Particular attention is also devoted to the important specialized subjects of hydraulics, strength, stability, fracture, and buckling.
The Offshore Pipeline Construction Industry

Subsea repairs and inspection are costly for petroleum and pipeline engineers and proper training is needed to focus on ensuring system strength and integrity. Subsea Pipeline Integrity and Risk Management is the perfect companion for new engineers who need to be aware of the state-of-the-art techniques. This handbook offers a "hands-on" problem-solving approach to integrity management, leak detection, and reliability applications such as risk analysis. Wide-ranging and easy-to-use, the book is packed with data tables, illustrations, and calculations, with a focus on pipeline corrosion, flexible pipes, and subsea repair. Reliability-based models also provide a decision making tool for day-to-day use. Subsea Pipeline Integrity and Risk Management gives the engineer the power and knowledge to protect offshore pipeline investments safely and effectively. Includes material selection for linepipe, especially selection of standard carbon steel linepipe. Covers assessment of various types of corrosion processes and definition of anti-corrosion design against internal as well as external corrosion. Gives process and flow assurance for pipeline systems including pipeline integrity management.

Subsea Engineering Handbook

Pipelines and Risers

Pipelines and Risers

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