# Introduction To Subsea Pipeline Engineering

Texte Imprimé
Subsea Valves and Actuators for the Oil and Gas Industry
A Handbook Produced to Accompany a Bentham Technical Training Course
Proceedings of the 4th International Conference on Maritime Technology and Engineering (MARTECH 2018), May 7-9, 2018, Lisbon, Portugal
Subsea Engineering Handbook
Subsea Rigid Pipelines – Methods of Installation
Deepwater Foundations and Pipeline Geomechanics
Integrity and Safety Handbook
Subsea Pipelines and Risers
Advances in Subsea Pipeline Engineering and Technology
Corrosion Control for Offshore Structures
Maritime Technology and Engineering 5 Volume 1
Subsea Pipeline Design, Analysis, and Installation
Equipment and Procedures
Progress in Maritime Technology and Engineering
Formation Damage During Improved Oil Recovery
Subsea Pipeline Design and Engineering
Fundamentals and Applications
Papers presented at Aspect ’90, a conference organized by the Society for Underwater Technology and held in Aberdeen, Scotland, May 30–31, 1990
An Introduction
Offshore Pipelines
Advances in Subsea Pipeline Engineering and Technology
Managing Pipeline Threats
Offshore Operations and Engineering
Design, Construction, Maintenance, Integrity, and Repair
Offshore Operation Facilities
International Journal of Engineering Research in Africa
Pipelines and Risers
Principles and Methods of Pipeline Protection and Safety Assurance
Introduction to Chemical Engineering
Subsea Pipelines and Risers
Subsea Pipeline Integrity and Risk Management
Proceedings of the International Symposium on Frontiers in Offshore Geotechnics (IS-FOG 2005), 19-21 Sept 2005, Perth, WA, Australia
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## INGRID CAREY

*Texte Imprimé* Gulf Professional Publishing
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 Valves and Actuators for the Oil and Gas Industry** CRC Press
This book addresses current and emerging challenges facing those working in offshore construction, design and research. Keynote papers from leading industry practitioners and academics provide a comprehensive overview of central topics covering deepwater anchoring, pipelines, foundation solutions for offshore wind turbines, site investigation, geohazards and emerging Australian frontiers. A further 125 peer reviewed papers introduce and analyse the critical challenges of offshore geotechnical engineering in the areas of the keynote subjects as well as piling, caissons and shallow foundation systems. The papers collected in these proceedings report a variety of numerical and theoretical investigations, experimental programs and field experience, with established design methods discussed alongside state-of-the-art practices.

A Handbook Produced to Accompany a Bentham Technical Training Course Gulf Professional Publishing
Piping and valve engineers rely on common industrial standards for selecting and maintaining valves, but these standards are not specific to the subsea oil and gas industry. Subsea Valves and Actuators for the Oil and Gas Industry delivers a needed reference to go beyond the standard to specify how to select, test, and maintain the right subsea oil and gas valve for the project. Each chapter focuses on a specific type of valve with a built-in structured table on valve selection, helping guide the engineer to the most efficient valve. Covering subsea-specific protection, the reference also gives information on high pressure protection systems (HIPPS) and discusses corrosion management within the subsea sector, such as Hydrogen Induced Stress Cracking Corrosion (HISC). Additional benefits include understanding the concept of different safety valves in subsea, selecting different valves and actuators located on subsea structures such as Christmas trees, manifolds, and HIPPS modules, with a full detail review including sensors, logic solver, and solenoid which is designed to save cost and improve the reliability in the subsea system. Rounding out with chapters on factory acceptance testing (FAT) and High Integrity Pressure Protection Systems (HIPPS), Subsea Valves and Actuators for the Oil and Gas Industry gives subsea engineers and managers a much-needed tool to better understand today’s subsea technology. Understand practical information about all types of subsea valves and actuators with over 600 visuals and several case studies Learn and review the applicable standards and specifications from API and ISO in one convenient location Protect your assets with a high-pressure protection system (HIPPS) and subsea-specific corrosion management including Hydrogen Induced Stress Cracking Corrosion (HISC)

**Proceedings of the 4th International Conference on Maritime Technology and Engineering (MARTECH 2018), May 7-9, 2018, Lisbon, Portugal** Gulf Professional Publishing
This volume contains 108 full length papers presented at the 2nd International Conference on Electric and Electronics (EEIC 2012), held on April 21-22 in Sanya, China, which brings together researchers working in many different areas of education and learning to foster international collaborations and exchange of new ideas. This volume can be divided into two sections on the basis of the classification of manuscripts considered: the first section deals with Electric and the second section with Electronics.
John Wiley & Sons
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.
**Subsea Engineering Handbook** Springer Science & Business Media
Subsea production systems, overview of subsea engineering, subsea field development, subsea distribution system.Flow assurance and system engineering. Susea structure and equiment. Subsea umbilical, risers and flowlines.
*Subsea Rigid Pipelines – Methods of Installation* Clarion Technical Conferences LLC
Progress in Maritime Technology and Engineering collects the papers presented at the 4th International Conference on Maritime Technology and Engineering (MARTECH 2018, Lisbon, Portugal, 7–9 May 2018). This conference has evolved from a series of biannual national conferences in Portugal, and has developed into an international event, reflecting the internationalization of the maritime sector and its activities. MARTECH 2018 is the fourth in this new series of biannual conferences. Progress in Maritime Technology and Engineering contains about 80 contributions from authors from all parts of the world, which were reviewed by an International Scientific Committee. The book is divided into the subject areas below: - Port performance - Maritime transportation and economics - Big data in shipping - Intelligent ship navigation -

Ship performance - Computational fluid dynamics - Resistance and propulsion - Ship propulsion - Dynamics and control - Marine pollution and sustainability - Ship design - Ship structures - Structures in composite materials - Shipyard technology - Coating and corrosion - Maintenance - Risk analysis - Offshore and subsea technology - Ship motion - Ships in transit - Wave-structure interaction - Wave and wind energy - Waves Progress in Maritime Technology and Engineering will be of interest to academics and professionals involved in the above mentioned areas.

*Deepwater Foundations and Pipeline Geomechanics* Gulf Professional Publishing

Underground pipelines transporting liquid petroleum products and natural gas are critical components of civil infrastructure, making corrosion prevention an essential part of asset-protection strategy. Underground Pipeline Corrosion provides a basic understanding of the problems associated with corrosion detection and mitigation, and of the state of the art in corrosion prevention. The topics covered in part one include: basic principles for corrosion in underground pipelines, AC-induced corrosion of underground pipelines, significance of corrosion in onshore oil and gas pipelines, numerical simulations for cathodic protection of pipelines, and use of corrosion inhibitors in managing corrosion in underground pipelines. The methods described in part two for detecting corrosion in underground pipelines include: magnetic flux leakage, close interval potential surveys (CIS/CIPS), Pearson surveys, in-line inspection, and use of both electrochemical and optical probes. While the emphasis is on pipelines transporting fossil fuels, the concepts apply as well to metallic pipes for delivery of water and other liquids. Underground Pipeline Corrosion is a comprehensive resource for corrosion, materials, chemical, petroleum, and civil engineers constructing or managing both onshore and offshore pipeline assets; professionals in steel and coating companies; and academic researchers and professors with an interest in corrosion and pipeline engineering. Reviews the causes and considers the detection and prevention of corrosion to underground pipes Addresses a lack of current, readily available information on the subject Case studies demonstrate how corrosion is managed in the underground pipeline industry

**Integrity and Safety Handbook** John Wiley & Sons

Offshore Operation Facilities: Equipment and Procedures provides new engineers with the knowledge and methods that will assist them in maximizing efficiency while minimizing cost and helps them prepare for the many operational variables involved in offshore operations. This book clearly presents the working knowledge of subsea operations and demonstrates how to optimize operations offshore. The first half of the book covers the fundamental principles governing offshore engineering structural design, as well as drilling operations, procedures, and equipment. The second part includes common challenges of deep water oil and gas engineering as well as beach (shallow) oil engineering, submarine pipeline engineering, cable engineering, and safety system engineering. Many examples are included from various offshore locations, with special focus on offshore China operations. In the offshore petroleum engineering industry, the ability to maintain a profitable business depends on the efficiency and reliability of the structure, the equipment, and the engineer. Offshore Operation Facilities: Equipment and Procedures assists engineers in meeting consumer demand while maintaining a profitable operation. Comprehensive guide to the latest technology, strategies, and best practices for offshore operations Step-by-step approach for dealing with common challenges such as deepwater and shallow waters Includes submarine pipeline, cable engineering, and safety system engineering Unique examples from various offshore locations around the world, with special focus on offshore China

**Subsea Pipelines and Risers** Elsevier

Aspect '94 is the most up-to-date and comprehensive assessment of the present and future of the pipeline systems industry. It comprises papers from leading experts in all areas of pipeline engineering and technology. As this book shows, the last few years have seen great strides forward in the field of subsea pipelines. Deepwater pipelines, long distance pipelines and complex systems transporting hydrocarbons and fluids to and from marginal field subsea wellheads and templates are all being implemented without significant problems. The pace of progress continues to accelerate in the subsea industry, and the scope to make further improvements is constantly being explored. Operators, consultants, suppliers and contractors are all researching, developing and testing new techniques and ideas.

**Advances in Subsea Pipeline Engineering and Technology** Gulf Professional Publishing

Pipeline engineering has struggled to develop as a single field of study due to the wide range of industries and government organizations using different types of pipelines for all types of solids, liquids, and gases. This fragmentation has impeded professional development, job mobility, technology transfer, the diffusion of knowledge, and the movement of manpower. No single, authoritative course or book has existed to unite practitioners. In response, Pipeline Engineering covers the essential aspects and types of pipeline engineering in a single volume. This work is divided into two parts. Part I, Pipe Flows, delivers an integrated treatment of all variants of pipe flow including incompressible and compressible, Newtonian and non-Newtonian, slurry and multiphase flows, capsule flows, and pneumatic transport of solids. Part II, Engineering Considerations, summarizes the equipment and methods required for successful planning, design, construction, operation, and maintenance of pipelines. By addressing the fundamentals of pipeline engineering-concepts, theories, equations, and facts-this groundbreaking text identifies the cornerstones of the discipline, providing engineers with a springboard to success in the field. It is a must-read for all pipeline engineers.

*Corrosion Control for Offshore Structures* Lulu.com

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

**Maritime Technology and Engineering 5 Volume 1** Gulf Professional Publishing
This book is an introduction to managing threats in pipelines. Everyone working in the pipeline industry - and anyone concerned with safe and reliable operation of pipelines - needs to be aware of threats and must understand how the resulting risks are managed. The book opens with an introductory overview and a chapter on 'Pipeline Engineering Principles, ' which introduces the reader to the infrastructure that transports our energy around the world: crude oil and natural gas pipelines. It also gives basic principles in pipeline engineering and explains some pipeline design concepts. Pipelines are made using steel tubes called 'line pipe, ' and Chapter 3, 'Line Pipe Principles, ' covers the manufacture of this line pipe and the standards used to ensure high quality. Chapter 4, an 'Introduction to In-line inspection, or ILI - the use of inspection tools inside a pipeline - reviews the in-line inspection tools available today for inspecting all the types of high-pressure pipelines. Chapters 5 through 12 cover some of the main threats to pipelines: corrosion, cracking, mechanical damage, geohazards, material and construction defects, theft, and specific threats to submarine pipelines. Chapter 13, 'Pipeline Defect Assessment Basics, ' introduces the reader to methods for assessing the significance of pipeline defects such as corrosion and dents. Chapter 14 is devoted to 'Pipeline Integrity Management.' Integrity management is part of asset management and includes the many and varied activities pipeline operators must undertake to ensure that releases of products from their pipelines do not occur. In the final chapter several eminent figures in the pipeline industry share their thoughts on the state of current technology and the needs and promise of the future.
Subsea Pipeline Design, Analysis, and Installation John Wiley & Sons
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.
Equipment and Procedures Springer Science & Business Media
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.
Progress in Maritime Technology and Engineering CRC Press
This book provides a comprehensive understanding of each aspect of offshore operations including conventional methods of operations, emerging technologies, legislations, health, safety and environment impact of offshore operations. The book starts by coverage of notable offshore fields across the globe and the statistics of present oil production, covering all types of platforms available along with their structural details. Further, it discusses production, storage and transportation, production equipment, safety systems, automation, storage facilities and transportation. Book ends with common legislation acts and comparison of different legislation acts of major oil/gas producing nations. The book is aimed at professionals and researchers in petroleum engineering, offshore technology, subsea engineering, and Explores the engineering, technology, system, environmental, operational and legislation aspects of offshore productions systems Covers most of the subsea engineering material in a concise manner Includes legislation of major oil and gas producing nations pertaining to offshore operations (oil and gas) Incorporates case studies of major offshore operations (oil and gas) accidents and lessons learnt Discusses environment impact of offshore operations
*Formation Damage During Improved Oil Recovery* CRC Press
Practicing engineers in the offshore and reservoir engineering industry will find this timely volume filled with practical advice and expert information on current oil field development from oil exploration to production.
*Subsea Pipeline Design and Engineering* CRC Press
Subsea Pipelines and RisersElsevier
*Fundamentals and Applications* Elsevier
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
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