1. Record Nr. UNINA9910784545803321 Autore Kyriakides S Titolo Mechanics of offshore pipelines . Volume 1 Buckling and collapse [[electronic resource] /] / by Stelios Kyriakides and Edmundo Corona Amsterdam; Boston, Elsevier, 2007 Pubbl/distr/stampa **ISBN** 1-281-03810-5 9786611038106 0-08-055140-8 Descrizione fisica 1 online resource (415 p.) Collana Mechanics of offshore pipelines;; 1 Altri autori (Persone) CoronaEdmundo Disciplina 665.544 Soggetti Petroleum pipelines Natural gas pipelines Underwater pipelines Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front cover; Mechanics of Offshore Pipelines; Copyright page; Contents; Preface; Chapter 1 Introduction; 1.1 Offshore Pipeline Design Considerations; 1.2 Buckling and Collapse of Structures; 1.3 Buckle Propagation in Offshore Pipelines; Chapter 2 Offshore Facilities and Pipeline Installation Methods; 2.1 Offshore Platforms and Related Production Systems; 2.1.1 Fixed Platforms; 2.1.2 Floating and Tethered Platforms; 2.2 Offshore Pipeline Installation Methods; 2.2.1 S-Lay; 2.2.2 J-Lay; 2.2.3 Reeling; 2.2.4 Towing; 2.3 The Mardi Gras Project; Chapter 3 Pipe and Tube Manufacturing Processes 3.1 Steelmaking for Line Pipe 3.1.1 Strengthening of Steel; 3.2 Plate Production: 3.2.1 Steelmaking: 3.2.2 Vertical Continuous Casting of Slabs; 3.2.3 Plate Rolling; 3.3 Seamless Pipe; 3.3.1 Continuous Casting of Round Billets; 3.3.2 Plug Mill; 3.3.3 Mandrel Mill; 3.3.4 Pilger Mill; 3.4 Electric Resistance Welded Pipe; 3.5 Spiral Weld Pipe; 3.6 UOE Pipe Manufacture; 3.7 JCO Forming; Chapter 4 Buckling and Collapse Under External Pressure: 4.1 Elastic Buckling: 4.1.1 Imperfect Pipe: 4.2 Plastic Buckling; 4.2.1 Lateral Pressure; 4.2.2 Hydrostatic Pressure; 4.2.3

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## Sommario/riassunto

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 1970's, 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...