

1. Record Nr.	UNINA9911006525203321
Autore	Sparks Charles P
Titolo	Fundamentals of marine riser mechanics : basic principles and simplified analyses // Charles P. Sparks
Pubbl/distr/stampa	Tulsa, OK, : Penn Well, c2007
ISBN	1-61583-800-7
Descrizione fisica	1 online resource (358 p.)
Disciplina	622/.33819
Soggetti	Drilling platforms Offshore oil well drilling Oil fields - Production methods
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	<p>""Contents""; ""Preface""; ""Acknowledgments""; ""Nomenclature""; ""SI Unit Equivalents""; ""Introduction""; ""Pipe and Riser Deflections and Global Stability: The Effective Tension Concept""; ""Application of Effective Tension: Frequent Difficulties and Particular Cases""; ""Pipe and Riser Stresses""; ""Pipe and Riser Strains""; ""Tensioned-Beam Behavior""; ""Statics of Near-Vertical Cables""; ""Near-Vertical Riser Static Behavior""; ""Stress Joint Design""; ""Riser Bundles: Local Bending Between Guides""; ""Near-Vertical Risers Associated with Floating Platforms with Stiff Tensioners""</p> <p>""Steel Catenary Risers""""Axial Vibrations of Fixed Risers""; ""Axial Vibrations of Hung-Off Risers""; ""Transverse Modal Vibrations of Near-Vertical Risers""; ""Appendix A: Tensioned-Beam Equations""; ""Appendix B: Tension Calculations for Simple Riser Cases""; ""Appendix C: Application of the Morison Equation to Risers""; ""Appendix D: Stress and Strain Relationships in a Thick-Walled Pipe""; ""Appendix E: Equivalent Poissona€s Ratios for Anisotropic Pipes""; ""Appendix F: Curvature of a Tensioned Beam Subject to Generalized Load""; ""Appendix G: Riser Bundle Pipe Moments between Guides""</p> <p>""Appendix H: Catenary Equations""""Appendix I: Damped Axial Vibrations""; ""Appendix J: Notes on Excel Files""; ""Index""</p>
Sommario/riassunto	Charles Sparks has written this definitive work on the fundamentals of riser mechanics, with the aim of increasing understanding of many

aspects of riser static and dynamic behavior. This book is based on the author's 28 years of experience with riser analysis and, in particular, on his previous publications, some of which have become classics of riser literature. Basic principles are clearly established using several different complementary approaches. The primary parameters that influence riser behavior are identified, and their influence is illustrated using 17 Excel files, provided on an accompanying CD-ROM, which readers are able to use with their own data. The files are intended primarily to allow readers to confirm the validity of statements made in the text, but they can also be used to for the simplified analysis of particular riser problems. This book is a must-own, for anyone who deals with riser design and analysis or with riser technology, from the classroom student to the offshore drilling platform engineer.
