

1. Record Nr.	UNINA9910785175303321
Titolo	Rock mechanics [[electronic resource]] : new research / / M. Abbie and J.S. Bedford, editors
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2009
ISBN	1-61728-017-8
Descrizione fisica	1 online resource (338 p.)
Altri autori (Persone)	AbbieM. <1958-> BedfordJ. S. <1959->
Disciplina	624.1/5132
Soggetti	Hydraulic fracturing Rock mechanics Rocks - Fracture Rocks - Testing
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	<p>""ROCK MECHANICS:NEW RESEARCH""; ""ROCK MECHANICS:NEW RESEARCH""; ""CONTENTS""; ""PREFACE""; ""RESEARCH AND REVIEW STUDIES""; ""WAVE-ASSOCIATED SEABED BEHAVIOUR NEAR SUBMARINE BURIED PIPELINES""; ""Abstract""; ""Introduction""; ""Background""; ""General Theory of Soil Adaptation to a Loading""; ""Wave-Seabed Interaction""; ""Uncoupled Consolidation Models""; ""Elasticity Theory for Impervious Solids""; ""Potential Flow Theory""; ""Heat Conduction Theory""; ""Coupled Two-Phase Consolidation Models""; ""Quasi-Static Consolidation Theory""; ""Semi- and Fully-Dynamic Consolidation Models""</p> <p>""Wave-Seabed-Pipeline Interaction""""Uncoupled Consolidation Models""; ""Coupled Two-Phase Consolidation Models""; ""Quasi-Static Soil Models""; ""Semi-Dynamic Soil Models""; ""Experimental Studies""; ""Scope of Current Study""; ""Three-Dimensional Boundary Value Problem""; ""Boundary Value Problem: Seabed Soil Consolidation""; ""Governing Equations""; ""Boundary Conditions""; ""Boundary Value Problem: Small-Amplitude Progressive Water Waves""; ""Three-Dimensional Finite Element Model""; ""Finite Element Model""; ""Spatial Discretization: Finite Element Mesh""; ""Temporal Discretization""</p>

""Validation of Numerical Model""""Verification against an Analytical Solution""; ""Verification against Experimental Data""; ""Wave-Induced Seabed Behaviour around Pipeline""; ""Principal Effective Stresses and the Maximum Shear Stress""; ""Parametric Study""; ""Influences of Ocean Wave Properties""; ""Wave Obliquity""; ""A. Three-Dimensional Geometry-Based Influences""; ""B. Influences of Three-Dimensionalities on Amplitudes of Soil Responses""; ""Wave Period""; ""Water Depth""; ""Influences of Seabed Soil Properties""; ""Soil Shear Modulus""; ""Soil Permeability""

""The Degree of Saturation""""Influences of Trench and Pipeline Geometries""; ""Trench Width""; ""The Trench Depth""; ""Pipeline Diameter""; ""Wave-Associated Seabed Instabilities""; ""Soil Shear Failure""; ""Soil Liquefaction""; ""Parametric Study""; ""Three-Dimensionalities of Ocean Waves""; ""Influences of Seabed Soil Properties""; ""Modulus of Soil Shear Stiffness""; ""Soil Permeability""; ""The Degree of Saturation""; ""Influences of Trench and Pipeline Geometries""; ""Trench Depth""; ""Trench Width""; ""Pipeline Diameter""; ""Influences of Ocean Wave Properties""; ""Wave Period""

""Water Depth""""Conclusions and Future Research Directions""; ""Conclusions""; ""Future Research Directions""; ""References""; ""STRESS AND SCALE-DEPENDENCY OF HYDRO MECHANICAL PROPERTIES OF FRACTURED ROCKS""; ""Abstract""; ""1. Introduction""; ""1.1. Fracture Systems and REV Concept""; ""1.2. Objectives""; ""2. Fracture System Analysis and DFN Model Generation""; ""2.1. Fracture System Data Analysis""; ""2.2. DFN Model Generation""; ""3. A Basic Study on Scale and Stress Effects - Approaches and Results""; ""3.1. The Discrete Element Approach""

""3.2. Constitutive Equation of Anisotropic Elastic Solids and the ComplianceTensor""
