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Titolo	Finite Element Analysis of the Collapse and Post-Collapse Behavior of Steel Pipes: Applications to the Oil Industry [[electronic resource] /] / by Eduardo N Dvorkin, Rita G. Toscano
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Shell element formulations for general nonlinear analysis Modeling techniques -- Collapse and post-collapse behavior of steel pipes Finite element models -- Experimental validation of the finite element models Applications: slotted pipes and axial loads -- Collapse and post-collapse behavior of deepwater pipelines with buckle arrestors. Cross-over mechanisms -- Conclusions.
Sommario/riassunto	This book presents a detailed discussion of the models that were developed to simulate the collapse and post-collapse behavior of steel pipes. The finite element method offers to engineers the possibility of developing models to simulate the collapse behavior of casings inside oil wells and the collapse behavior of deepwater pipelines. However, if technological decisions are going to be reached from these model results, with implications for the economic success of industrial operations, for the occupational safety and health and for the

environment, the engineering models need to be highly reliable. Using these models engineers can quantify the effect of manufacturing tolerances, wear, corrosion, etc. This book describes in great details the experimental programs that are developed to validate the numerical results.
