# EVALUATING DAMAGED SUBSEA PIPELINES USING AN ENGINEERING-BASED INTEGRITY MANAGEMENT PROGRAM

**C. R. Alexander**

## ABSTRACT

Establishing subsea pipeline integrity requires an understanding of the specific threats, their relationship to the overall condition of the pipeline, and the mitigating measures required to assure safe operation. In the past, the pipeline industry relied on years of research and experience to develop a set of tools to analyze these threats and apply conservative solutions to ensure pipeline integrity.

This paper presents a detailed discussion of how existing knowledge, advances in analytical techniques, experimental methods, and engineering rigor are combined to develop field-friendly tools to characterize and ensure pipeline integrity. Two case studies are included, the first, to demonstrate how the proposed method was used to assess the integrity of a subsea dented pipeline, the second, provides the reader with an example of how to develop a tool for evaluating the severity of dents in pipelines using available public-domain research. It is the hope of the author that the approach presented in this paper will foster further developments and advance pipeline integrity management for subsea pipelines.

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