

New Generation Deepwater Risers A Design Methodology

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Abstract

This paper presents an overview of the design methodology and manufacturing of a New Generation of Deepwater (Drilling) Risers, NGDR, that were developed for ultra-deepwater drilling with a new generation of DP drillships and semisubmersibles. Time constraints on delivery and dusting off the analysis tools created some special design and manufacturing challenges. Riser design and manufacturing industry standards had been idle for at least ten years. Bringing them forward without time for industry consensus was risky. Today, the riser systems described here, representing about one-half of the NGDR inventory, have worked without any significant failures and are responsible for most of the deepwater wells drilled beyond about 5,000 ft in the Gulf of Mexico, West Africa and Brazil.

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