

## Study on the Applicability of Internal Corrosion Direct Assessment Methodology in Deepwater Submarine Pipelines

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**Abstract** In view of the complicated factors affecting internal corrosion of deepwater submarine pipelines, the current data cannot meet the requirements of internal corrosion direct assessment methodology, and the step of direct examination was difficult to realize to submarine pipeline for the limit of environment conditions, this paper carried out a study on the applicability of internal corrosion direct assessment methodology in deepwater submarine pipelines. According to the characteristics of submarine pipelines, the existing ICDA technology and process are improved, and a suitable corrosion risk assessment method for deepwater submarine pipe is formed by exploring the combination of corrosion monitoring data analysis, corrosion simulation test, pipeline flow assurance simulation analysis and other technical methods. Through the specific analysis of the actual case, the method can meet the urgent need of corrosion assessment in some deepwater submarine pipelines and solve the difficult problem of internal corrosion risk assessment in deepwater submarine pipelines at present.

**Keywords** deep water; Submarine pipeline; Internal Corrosion Direct Assessment Methodology; Internal corrosion risk assessment.