

Reliability of the High Strength Pipeline Steel under Corrosion Defect

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Abstract: The demand of energy based on hydrocarbons, such as gas and oil, requires construction of more and more new pipelines. Therefore, the assessment of the remaining life of these pipeline structures became increasingly important to ensure the continuity of production and distribution operations. The reliability of these industrial facilities is largely conditioned by specific characteristics of each system, by its conditions of use and its environment. Generally, the causes of deterioration of hydrocarbon transportation pipelines are related to the presence of apparent defects (pinholes, cracks, corrosion, etc). This study is aimed to estimate the reliability of pipeline structures. The B31G mechanical model of degradation was used to assess the probability of failure through dimensions of defects.

Keywords : Reliability, pipeline, Defects, Mechanical Model