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Reliability of the high strength pipeline steel under corrosion defect

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Abstract: The demand of energy such as hydrocarbon, gas and oil requires more and more construction of new pipeline. Therefore, the assessment of the remaining life of these pipelines structure became more and more important to ensure the continuity of production and distributions operations. The reliability of these industrial facilities is largely conditioned by specific characteristics for each system, in its conditions of use, its environment. Generally the causes of deterioration of hydrocarbon transportation pipelines are related to the presence of apparent defects (pinholes, cracks, corrosion.....etc.). This manuscript is a study to estimate the reliability of these 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.