Stress Corrosion Crack Identification with Direct Assessment Method in Pipeline Downstream from a Compressor Station

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Abstract : Stress Corrosion Crack (SCC) in pipeline is a type of environmentally assisted cracking (EAC), since its discovery in 1965 as a possible cause of failure in pipeline, SCC has caused, on average, one of two failures per year in the U.S, According to the NACE SCC DA a pipe line segment is considered susceptible to SCC if all of the following factors are met: The operating stress exceeds 60% of specified minimum yield strength (SMYS), the operating temperature exceeds 38°C, the segment is less than 32 km downstream from a compressor station, the age of the pipeline is greater than 10 years and the coating type is other than Fusion Bonded Epoxy(FBE). In this paper as a practical experience in NISOC, Direct Assessment (DA) Method is used for identification SCC defect in unpiggable pipeline located downstream of compressor station.

Keywords : stress corrosion crack, direct assessment, disbondment, transgranular SCC, compressor station

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