

Characterization of a welded joint in steel API.5L.X70 having undergone successive repairs

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Abstract : The object of this paper is to study the effect of the successive repairs on the weldment quality, knowing that these repairs constitute a main problem in the hydrocarbons transportation industry. We study the effect of several thermal cycles welding on the microstructural welding joints evolution, particularly the heat affected zones and its extend. We weld and repair many times a steel sample used in the hydrocarbons transportation. The metallographic analysis and mechanical tests results show the harmful effect of repairs that cause a prejudice on the life of weldment

Keywords : welding, Repair, Thermal cycle, Heat affected zone