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THE EFFECT OF SUCCESSIVE REPAIRS ON THE WELDMENT QUALITY OF API 5L X 52 STEEL PIPES

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Abstract : This work presents the study of the influence of successive repairs on the microstructure and mechanical behavior of the HAZ in a welded HSLA steel API X52. The results show that the succession of repairs in the same area has a direct influence on the microstructure morphology for all the welded joints samples when the mechanical properties by means of tension tests agree well with standards. However, the obtained values of the tensile strength of the various welded pipes are acceptable by the standards which imply the qualification of the welding process for all the repairs. Therefore, the previous investigations lead to the conservation of the same mechanical properties, i.e. the possibility of making more repairs that the standards specify. The grain size of the HAZ obtained after the first repair decrease in impact strength value as the number of repairs increases.

Keywords : welding, Repair, Heat affected zone