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Effect of Welding Current on Microstructure Properties of dissimilar metal joints

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Abstract : Dissimilar metal joints between X70 and duplex pipes will be required to prove their weldability in the oil and gas industry, the welds have been performed by GTA welding process using alternating current, and different values of current (between 75 and 140A), without filler metal. The results show that, the heat input has a great influence on microstructure. The details of optical microscopic observations and Scanning electron microscopy (SEM) are discussed.

Keywords : GTA welding, Dissimilar welding, welding current, HSLA, DSS, HAZ, microstructure