

عنوان مقاله:

Effect of Input Heat of SMAW Process on Microstructure and Corrosion of Weld Metal API 5L X65 Steel Joints Coated with INCOLOY 825 Superalloy

محل انتشار:

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خلاصه مقاله:

In this study, the effect of input heat of SMAW process on the microstructure and corrosion behavior of welded metal API 5L X65 steel joints coated with INCOLOY 825 superalloy was investigated. Welding with input heat of ۱۰۰۳, ۰۰۹۹ and ۰۰۹۴ kJ / mm was performed using E۷۰۱۸ filler metal by SMAW process. FESEM scanning light and electron microscopy was used to study the microstructure. Evaluation of corrosion behavior of weld metal was performed using TOEFL polarization test in ۳.۵% NaCl solution. The microstructural results showed that the needle ferrite in the weld metal microstructure decreased with increasing inlet heat. While the values of Wiedmann Statten ferrites are multifaceted and grain boundaries. It was found that increasing the inlet heat had a negative effect and reduced the corrosion resistance of the weld metal.

کلمات کلیدی:

X65 steel, corrosion, electrode ۷۰۱۸, welding, SMAW Process, فولاد X65, خوردگی, الکتروود ۷۰۱۸, جوشکاری, فرآیند SMAW

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