
C05-1684 - Effects of Friction Stir Welding on the Structure and Protectiveness of Rust Layers Grown on Low-Alloyed Steels Under Cyclic Wet/Dry Corrosion Condition



Wednesday, 9 October 2024



1040 - 1100



Room 303A (Level 3, Hawaii Convention Center)

Abstract

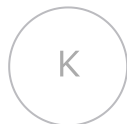
Due to superior mechanical properties and low cost of steels, they are widely used as structural materials for infrastructure. However, steels are prone to corrode in atmospheric environments. Therefore, several alloying elements are added into carbon steel to improve atmospheric corrosion resistance. Arc welding has been widely used as a joining process for steel infrastructure, but segregation of solute elements occurs, leading to weld cracking and decreased corrosion resistance. Therefore, countermeasures have been desired. Friction stir welding, so-called FSW process is a solid-state joining technique that can prevent the segregation. In the present work, the effects of friction stir welding on the structure and protectiveness of rust layers on low-alloyed steel were examined.

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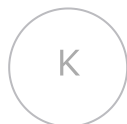


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