

Friction Stir Welding of Al-Mg-Mn Aluminum Alloy Plates: A Review

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Abstract : Friction stir welding is a solid state welding process. Friction stir welding process eliminates the defects found in fusion welding processes. It is environmentally friend process. 5000 and 6000 series aluminum alloys are widely used in the transportation industries. The Al-Mg-Mn (5000) and Al-Mg-Si (6000) alloys are preferably offer best combination of use in Marine construction. The medium strength and high corrosion resistant 5000 series alloys are the aluminum alloys, which are found maximum utility in the world. In this review, the tool pin profile, process parameters such as hardness, yield strength and tensile strength, and microstructural evolution of friction stir welding of Al-Mg-Mn alloys (5000 Series) have been discussed.

Keywords : Al-Mg-Mn alloys, friction stir welding, tool pin profile, microstructure and mechanical properties

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