

International Journal on Recent Researches In Science, Engineering & Technology

A Journal Established in early 2000 and upgraded to International journal in 2013 and is in existence for the last 10 years. It is run by Retired Professors from NIT, Trichy. It is an absolutely free (No processing charge No publishing charge etc.) Journal Indexed in DIIF and SJIF.

Research Paper

Available online at: <u>www.jrrset.com</u> Chief Editor : 1. Dr. M.Narayana Rao, Rtd. Professor, NIT, Trichy. (Engg.&Technology division) 2. Dr. N.Sandyarani, Ph.D., Professor, Chennai based Engg.College, (Science division) ISSN (Print) : 2347-6729 ISSN (Online) : 2348-3105

Volume 1, Issue 10, Oct. 2013

> DIIF IF :1.46 SJIF IF: 1.329

Studies On Corrosion Resistance Properties of Mg Alloy Friction Stir Weldments-Issues and Challenges

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Abstract :Extensive data has been reported in literature on the tensile strength values of Mg alloys including Mg alloy friction stir weldments. The effect of the various alloying elements on resistance, poisson ratio, thermal conductivity corrosion resistance etc, have also been reported in the literature. An attempt is made in this paper to make an exhaustive review of recent research papers published on corrosion resistance of friction stir weldments of Mg and other alloys and to critically discuss the issues and challenges associated with the corrosion resistance of friction stir weldments. Various conclusions drawn from of the present work are presented. The major contribution of the present work lies, in updating the research findings on corrosion resistance of friction stir weldmets. This study is likely to pave way for developing technologies for improving the corrosion resistance of friction stir weldments. Though the paper concentrates on Mg alloys, a comprehensive study of other alloys like Al is also made to have an indepth understanding of the latest work conducted in the current field.