METHODIST COLLEGE OF ENGINEERING & TECHNOLOGY
Affiliated to Osmania University, - College Code – 1607

Ref: MCET/CA/024 **Date: 25-10-2018**

CERTIFICATE OF APPRECIATION

This is to certify that **Dr. A Rajashekar, Professor** Department **of Mechanical Engineering** for extending the expertise as a **REVIEWER** in the peer review of research papers submitted for **Transactions of Indian Institute of Metals, Manuscripts reference is TIIM-D-18-00274.** The Management, Director, Principal, Dean Engineering, HOD would like to place on record their appreciation.

PRINCIPAL / DIRECTOR

Principal / Director
Methodist College of Engg. & Tech
Abids, Hyderabad-01.

TIIM: Reviewer Invitation for Investigation of structure property relationship of the dissimilar weld between austenitic stainless steel 316L and duplex stainless steel 2205

Inboxx

Madhusudan Reddy G <em@editorialmanager.com> Fri, Jun 8, 2018, 11:43 PM

to me

Dear Dr. A.,

As the Editor of the journal Transactions of the Indian Institute of Metals I want to ask you if you could review the article "Investigation of structure property relationship of the dissimilar weld between austenitic stainless steel 316L and duplex stainless steel 2205" for a possible publication in our journal.

This is the abstract:
In the present study, influence of microstructural changes in the mechanical and corrosion properties of the dissimilar weld between austenitic stainless steel (ASS 316L) and duplex stainless steel (DSS 2205) has been reported. The weld joint was fabricated through use of gas tungsten arc welding (GTAW) process with a nickel enhanced filler metal ER 2209. The microstructural changes observed in the fusion zone such as nucleation of delta ferrite (δ), austenite (γ) reformation, precipitation of intermetallic phases and the formation of coarser ferrite phases in the HAZ are reported. Also, the mechanical properties of the weldment such as microhardness, impact toughness and tensile properties have been correlated with the microstructural changes. Potentiodynamic polarization test result showed better electrochemical behavior for ASS 316L than the weldment and the parent metal of DSS 2205. It was found that the austenite phase is electrochemically more stable than the duplex microstructure. On the other hand, excellent stress corrosion cracking (SCC) resistance was achieved by the weldment as well as the parent metal of DSS, whereas ASS 316L ended with surface fissures.

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