

EDITORIAL

The issue of the IWJ comes to you with a slightly new look. It shows Friction Welding of dissimilar weld joints. The cover design has been changed after four issues as per norms. However, we will invite our readers next time to send for a suitable design and finally it could be selected from all suggested designs in our G.P. Committee.

The Indian Institute of Welding sagaciously organizes National and International events where from mutual benefits are drawn by all concerned. This time National weld meet (NWM 2013) is being organized by Baroda Branch on an interesting topic. Dissimilar welding which is almost common approach now in various sectors like automobiles, power plants, shipyards etc where mechanical properties are tailored to local requirement and their performance is often crucial to the function of the whole structure. For example, in automotive industry, the concept of using dissimilar functional material has derived mainly to improve fuel efficiency and reducing CO₂ gas emissions.

The major and well known problems encountered in welding dissimilar metal joints are: dilution of the weld metals, carbon migration near the fusion line, formation of brittle structure such as Intermetallic compound, martensite etc, distortion due to mismatch in thermal expansion coefficient and thermal conductivity which have imposed a great challenge before the multi-material fabricators. I believe the new ideas which will emerge from NWM 2013, would help welding industry in facing the challenges for dissimilar weld applications.

This issue of IWJ has one award winning paper and two contributed technical papers.

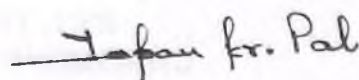
In the H.D. Govindraj Memorial Research award winning paper on "Formation of delta ferrite in the weld metal of 9 – 12 Cr steels" the authors while outlining micro structure of base metal have characterized for the formation of delta ferrite in weld metal under different welding conditions. Authors observed that apart from chemical composition, welding parameters should be optimized to achieve delta ferrite free, cent percent martensite in the weld metal.

The role of root opening and throat thickness in a single V-groove, bevel groove and double V groove butt joint in submerged arc weld has been studied for angular distortion in the paper "Effect of groove Angle in Butt joints on Angular Distortion in submerged Arc Welding". The authors have illustrated the experimental data which could be of interest to the designer.

In the paper "Microstructure and percentage elongation analysis for friction Stir Welding of joining A6061 and A6082 alloys", the authors have used orthogonal array of Taguchi approach to find out most significant FSW parameters affecting percentage elongation.

I believe, apart from research papers, IWJ can provide our readers some excitement on welding / joining related activities prevailing in our country. We invite our welding fraternity to send their new achievement for sharing the joy of welding.

Lastly, I don't want to put any excuse for the late in bringing July issue of IWJ.



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