
From the Editor's Desk

This issue of the IWJ comes to you with a new look ! The last cover design, plain yet pleasant, has served us long and well. But we had been thinking for some time past that it would both be more lively and fitting if the cover carried some graphic representation of the work we are involved in. To that end, we had invited our readers to send in a suitable design, and we are glad at the good response received. We thank them for their efforts. After considering all the suggested designs, our G.P. Committee has finally selected the one that now adorns the cover.

It shows a scanning electron micro-fractograph of a sound welded joint of a ferrous alloy which failed in a tension test. The weld metal zone in the centre of the fractograph is flanked, on either side of it, by the base metal continuum. The global structure, in general, consists of the micro void coalescence (MVC) mode of fracture. Islands of quasi-brittle facets (flat arcs) are present, but only discretely.

Increasing demand for metals and alloys for cryogenic temperature applications is leading analytical activities to characterise potential material properties hitherto considered being in the domain of physicists. In the paper **Design of Stainless Steel Welding Consumables For Cryogenic Services**, the authors show the effect of decreasing temperature on the mechanical properties of the alloy concerned which highlights such areas as dislocation interaction realm, as well as the effect of alloying equivalence ($Cr_{eq} : Ni_{eq}$) on micro-macro properties in the weld metal zone per se. It would be interesting to make an assessment, on micro & macro scales, of low temperature fatigue properties as well under the influence of cryogenic enclosures, liquid and gaseous.

For economic considerations alone, welding parameters need optimisation and in the paper **Slag-Metal Reaction: An Overview**, the authors have considered, broadly, the thermodynamic aspect in the reaction core integrated for a "small volume" of reactants. In consideration are the kinetics of micro-macro scale boundary conditions for alloy partitioning and subsequent solidification propensities which would ultimately characterise the weld metal zone in particular notwithstanding, of course, the continuum effects of the welding parameters on the kinetics of the reactions involved.

We would like to reiterate our concern regarding finance for our journal. In a past issue (Vol. 29, No.4), we have reviewed its dire state. It is only from advertisements that we derive our revenue to sustain the journal's publication. But with the present level of ads received, we can hardly cover 40% of the publication cost, the balance being subsidised from the Institute's resources, which are under a constant strain. Yet the quality of the journal is improving; a professional proof-reader has been engaged. In view of all this, we need to considerably improve on the quantum of ads. Only through the individual efforts of our members can we possibly overcome the crisis.

'Please send/procure ads for your journal' - is our call of the hour. And all success to you in this !

Sd/- **Dr. P. Majumder**
Editor