
From the Editor's Desk

With the advent of the year 2003 the 36th Annual General Meeting (AGM) of the Institute was weathered in and was held on 24th January (03) at the Rosewood Hall, Park Hotel, Kolkata. President of the Institute Dr. Baldev Raj had chaired the AGM and had ably conducted the meeting. However Dr. Baldev Raj could not continue as President beyond the tenure due to his pressing personal assignment. The Institute would surely miss his leadership. We wish him all success. We also gracefully welcome the new President of the Institute Mr. K. M. Panthaki and all the members of the council for the year 2002-2003. We look forward to the development to new heights during the coming year.

Transformation (Kinetics) in metal forms is but translation of nuclear mass through different energy levels during dissolution, deposition, deformation that are concerns of the welding of metals and alloys in general. Interrelated R&D works assess predictability of transformation kinetics highlighting the effects of energy inputs on properties derived therefrom. The experimental details notwithstanding 'observation' of the fact that lowering of heat input (welding) effectively lowers residual stresses is an example of the kind. The authors P. K. Ghosh et al in their paper "Control of Residual stresses using Narrow Gap Technique in SMA Welding of Structural Steel" show with clarity role of contraction stresses retained in the weld metal that formalises into residual stresses that affects, ultimately, mechanical and corrosion properties of the fabricated (welded) structures. Unpredictable failure of fabricated structures due to interaction between residual stresses (tensile) and environment underscores the importance of this work.

In weld metal deposition energy input criteria could be exacerbated due (mainly) to inadequate balancing of potential, current and time that shape the droplets forming the deposits. With a (appted) constant potential, current and time could be usefully manipulated for a desired rate of deposition which would in turn shape, size and develop properties of the weldmetal predictably. Even though highly automated transformer facilities are available, for continuous upgrading of such facilities related research and development works are essential. Such a work is reported, skillfully, by Sunil Pandey et al in their paper "Welding Current in Submerged Arc Welding." Economics apart, the paper highlights case of energy control mechanism graphically and could be of much sought-after technology to the weld-men in general.

Inauguration of the new Welding Technology Centre (WTC) at the Jadavpur University on 5th December 2002 was undoubtedly an encouraging development which would certainly go a long way in advancement of welding technology and related applications, particularly in the Eastern India. A detailed report is printed in this issue.

Late as we are, we submit our apology wishing a happy and prosperous year.

Dr. P. Majumdar
— Editor