

From the Editor's Desk



In October 1986 issue of the *Indian Welding Journal* we published a paper on Robotics and its terminology which is considered a most significant development towards welding automation. It is known that Welding Robotics can play a big part in substantially increasing welding productivity covering almost all manufacturing industries concerned with welding and metal fabrication. However, automation in welding cannot be fully realised by using a Robot alone which is nothing but a programmable multi-axis welding manipulator.



Cover Photograph
Configuration of Welding Torch Search
Tracker and Arc Oscillator probes.

The concept of automation in its entirety encompasses close loop feed back controls of all the welding parameters to accurately utilise the heating effect of the arc and to exercise control on various factors that contribute to traditional weld quality. The developments so far carried out has resulted in the use of advanced power sources, wire feed mechanism, welding gun movement, including sensing devices and finally the control of the welding speed. But in most of the cases these have not covered the physics of the arc zone i.e. the arc itself, the metal transfer and the behaviour of the weld pool. Recently, a new dimension has been added to take the control of the arc zone within the ambit of the electronic and electrical control systems in order to achieve zero defect welds. One of the examples which may be cited is Synergic Pulsing technique applicable to gas shielded processes.

Keeping the above developments in view we have in the current issue included two papers to present a few examples of different approaches adopted in achieving progressive automation. I am hopeful that these will be of interest to the readers.

In this issue you will also find a list of papers on the range of subjects presented in the *International Welding Conference 1987* held in New Delhi on 12-14 January, 1987. This Conference was jointly organised by the Welding Research Institute and Tiruchirapalli Branch of the *Indian Welding Institute*.

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Editor