

10. STUDY AND ANALYSIS OF MICRO HARDNESS OF THE CLADDED BEAD GEOMETRY DURING PULSE MIG WELDING

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Cladded specimens are considered for this present investigation, it is prepared by pulsed metal insert gas welding process. Hardness of the materials are basically depends on input process parameters. The parameters are welding current, welding speed and nozzle-to-plate distance is considered for the present investigation. In the present work an effort has been made to study the effect of the process parameters on micro hardness of stainless steel cladding. The materials used for the investigation are IS: 2062 mild steel as a base metal and 317L stainless steel solid wire as the filler material. The micro hardness values obtained on cladded zone are unaffected zone on left hand side (UAZLH), unaffected zone on right hand side (UAZRH) and weld centre zone (WCZ). RSM method is applied to plan the experiments. The micro hardness variation across the different zone was determined. The models were developed to predict the relationship between process parameters and hardness of the cladded zone.

Journal of Science and Innovative Engineering & Technology