

ABSTRACT

In this competitive world, the customers perceive the most reliable high quality with low-cost product. The selection of improper GTAW process parameter increases the power consumption, material consumption, man power and cost of the product decreasing the weld quality. This project work was the part of program for the development of AA5052 & AA6082 to increase the mechanical properties and minimization of metallurgical defects thereby increasing the good weldment. From the experimental investigation we found good tensile strength obtained at third value of 130 PC/50 BC & bevel angle 70° and lower Hardness strength obtained at first sample value of 110 PC/50 BC & bevel angle 55° is the best value and it does not create any major changes and failures in the testing process. Based on the bead geometry images the test plate no -3 had maximum depth of penetration and minimum bead width was obtained.

Keywords: GTAW, AA5052 & AA6082 Tensile strength, Bead Geometry