STUDY OF DISTORTION AND PHYSICAL DEFECTS IN GTAW WELDING WITH FILLER ON ALUMINIUM 6061 ER4043 MgSi WITH HEAT TREATMENT

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Abstract
The development of welding technology developed in the shipping industry currently uses TIG welding using aluminum as an ingredient in the manufacture of the hull frame with fillet weld welding methods.

From the test results are expected to result in distortion of the data and the data characteristic radiographic picture of violence, micro-structural observations in 6061 as a comparison to the parent metal.

Hardness values obtained from experiments on specimens with preheat and welding decreased compared to specimen without welding and preheat. Observations on the micro-structure and preheat pengelsan specimens showed rougher microstructure compared with specimens without preheat and welding.

Keywords: TIG welding, aluminum, aluminum 6061