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Experimental Investigation on Mechanical and Distortion Characteristics of Titanium/Aluminium Dissimilar Metal Joint Using Laser Beam Welding

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Description Laser beam welding (LBW) is based on interaction between the laser source and base metals. Different methods have been developed recently to produce weld joints of light metals. This produces good weld bead to simplify the structure and reduce the weight and cost to meet the important concerns of aerospace industry. To achieve these, Ti (Ti6Al4V) and Al (AA2024) dissimilar alloy sheets are welded with butt joint configuration using Nd: YAG pulsed laser welding unit. The weldment is subjected to tests to evaluate mechanical and distortion characteristics. From the test results, it is found that LBW is very much suitable for joining Titanium/Aluminium (Ti/Al) alloy sheets.

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