

LASER WELDING OF THIN SHEET HEAT-TREATABLE STEEL

Slobodan Kralj, Branko Bauer, Zoran Kožuh

Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb, Croatia
fsb.zk@fsb.hr

ABSTRACT

A report on the welding of heat-treatable steel 25 CrMo 4 and 42 CrMo 4, 2mm thick sheet, with high power Nd:YAG laser is presented. Laser and process parameters were explored. Argon and Helium were used as shielding gases. Metallographic analysis was done to assess weld geometry on bead on plate welded samples. Optimum focus position and full penetration welding speed range was determined for each combination of material and shielding gas.

KEYWORDS: laser welding, steel, Nd:YAG laser, parameters.

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