LASER JOINTS OF HIGH STRENGTH STEELS

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Abstract

High-strength steels are specific to their fine-grained and multiphase structure. Therefore, the fusion welding these properties significantly degrades and welding methods must be properly improved, especially in terms of the heat input. One of the most appropriate ways is laser welding. The paper describes the properties of welds including microstructure and fatigue behavior of steels with yield strength above 500 MPa. Results confirm that the strength of the welds are very close to the original material and the fatigue life is very high.

Keywords: laser, welds, high strength steels, fatigue, strength

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