

VARIOUS MATERIALS WELDABILITY FOR STEEL CASTING

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Abstract

The aim of this paper was the welding of various materials that will be used in the exploitation of a rotary excavator for coal mining. Problems observed in practice are frequent welding errors, repairs, loss of time, loss of additional material and hiring a large number of people. Welding was performed on caterpillar crawler pad. In this paper, welding was referred to the steel castings of GX120Mn13 and G22NiMoCr5-6 with structural steel S355. Welding process was defined by MAG procedure, plasma cutting, bending on press brakes, welding parameters and errors in joints. Also, the complete manufacturing procedure that was performed was described, starting from cutting parts to surface protection. This explains how the crawler pad of rotary excavator was made, where errors occurred, what were the weaknesses of the material as where was a lack of process organization. Through the paper, it has been shown where the manufacturing process will be conducted more rationally with minimal errors and deformations.

Keywords

Plasma cutting, hydraulic press, rotary excavator, MIG/MAG welding

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