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IMPROVEMENT OF THE WELDING PROCEDURE OF THE FIRE TRUCK REAR AXLE SEMI HOUSING ASSEMBLY¹

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In this paper is considered the technology of the semiautomatic welding of the steel assembly of the fire truck semi housing. Since the different steels are being welded, it is necessary to analyze the effects of welding on mechanical properties and microstructure of individual joint zones. The weldability of the base metal (the semi-housing tube, ring and flange) is analyzed the first, and then the welding procedure and filler metal are selected, and finally, then technological parameters of welding are being calculated. When estimating the base metal weldability, the numerical methods were applied, as well as experimental ones based on measuring the hardness of the critical zones and analysis of their microstructure. Experimental investigations are aimed at checking and eventual correcting of the proposed welding technology. This assembly was investigated since it is one of the most important and vital parts of the fire truck.

Key words: Weldability, Parameters of the welding, Hardness, Microstructure,
Filler metal

POBOLJŠANJE POSTUPKA ZAVARIVANJA SKLOPA POLUOBLOGE ZADNJEG MOSTA KAMIONA VATROGASNOG VOZILA²

U ovom radu se razmatra tehnologija poluautomatskog zavarivanja čeličnog sklopa poluobloge kamiona vatrogasnog vozila. Pošto se zavaruju različiti čelici potrebno je analizirati efekte zavarivanja na mehaničke osobine i mikrostrukturu pojedinih zona spoja. Najpre se analizira zavarljivost osnovnog materijala (cevi poluobloge, prstena i prirubnice), zatim bira postupak zavarivanja i dodatni materijal i najzad proračunavaju tehnološki parametri zavarivanja. Pri oceni zavarljivosti osnovnog materijala korišćene su računске i eksperimentalne metode zasnovane na merenju tvrdoće kritičnih zona i i analizi njihove mikrostrukture. Eksperimentalna ispitivanja imaju za cilj da se proveru i eventualno koriguje predložena tehnologija zavarivanja.

Ključne reči: Zavarljivost, Parametri zavarivanja, Tvrdoća, Mikrostruktura, Dodatni metal

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