

ANALYSIS OF ELECTRIC ARC WELDING OF STEEL STRUCTURE IN THE CONSTRUCTION OF PREFABRICATED FACILITIES

Aleksandra Mitrovic^{1*}, Milan Milosev¹, Zorana Golubovic²

¹ The Academy of Applied Technical Studies Belgrade, 11000 Belgrade, Serbia
² University of Belgrade, Faculty of Mechanical Engineering, 11120 Belgrade, Serbia

*Corresponding author e-mail: aleksandra.mitrovic@visokatehnicka.edu.rs

Abstract

The topic of this paper is welding analysis of steel construction of prefabricated facilities. The basic material for making steel structures – steel S235JR, with an adequate technological process was selected and used. In a detailed paper introduction, a layout algorithm of all operations performed during production is defined. During the production of prefabricated facilities, beside machining and welding, special attention is paid to the choice of basic and additional material, preparation and cleaning of welding edges, defects and repairs of welded joints. Welding was performed by an electric arc process which represents one of the most efficient ways of welding nowadays. The choice of methods used in this paper is determined by the nature of the problem of undesirable errors in the weld. Also, welding control of welded joints with the Ultrasonic method is presented. The obtained results showed that the welded joints were of good quality. This importance of this research is reflected through its practical application.

Keywords

Electric arc process, steel S235JR, welded joint, welding control

Acknowledgement

The authors of this paper would like to express gratitude to the Academy of Applied Technical Studies Belgrade for their support.