

Increasing the productivity of tungsten inert gas welding **Creșterea productivității sudării WIG**

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Abstract

This paper presents those experimental results, which were obtained in many years research that focused to the increasing of productivity of the tungsten inert gas (TIG) welding. We focused on two directions. One of these – the gas mixture shielded and the pulsed TIG welding – is widely applied in the industry. The second one was the activated TIG (ATIG) welding which is a less known and rarely applied process variant of the TIG welding. Regarding to the attainable weld penetration depth values resulted by various shielding gases, we demonstrated that some of them may facilitate to achieve ATIG welding-like deep penetration. Concerning the 2nd objective, we established an overview on the proper technological characteristics of the silica powder using ATIG welding of stainless steels and on the consequences in the weld bead geometry of the welding parameters.

Keywords: *TIG welding, ATIG welding, weld penetration, productivity*