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THE METAL MOLTEN AT THE END OF THE ELECTRODE WIRE

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ABSTRACT

On short-arc welding, short-circuiting transfer type, due to the specific welding parameters and the features of this type of transfer of the droplet to the welding pool, the instant retrieval molten metal part solidified at the end welding electrode wire has a shape determined by a complex equilibrium of forces. From the whole existing metal molten volume, only a drop of molten metal is retained and solidifies at the electrode's end. The paper suggests that the estimation of the size, form and volume of the metal molten solidified drop at the end of the electrode wire may help describing the influence of the welding parameters on the mass transfer. Thus, correlations between the technological parameters and the forces acting and determining the separation of the molten metal in short-arc MAG-CO_2 welding, short-circuiting natural transfer mode can be set up.

KEYWORDS: Molten metal, short-arc welding, electrode wire, experiments.

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