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ANALYSIS OF THE STABILITY OF A PULSE POWER SUPPLY FOR MICRO RESISTANCE WELDING

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Abstract

In this paper, a pulse power supply for micro resistance welding machine, operating in the Interleaved mode is considered. Sharp changes of the welding contact resistance during the welding process are identified as the main factor influencing the stability of the power supply. In order to determine the conditions for achieving the stable operation of the power supply, the analysis of its stability as of a closed automatic control system was carried out. That made it

possible to adjust the current regulator in accordance with the requirement of ensuring high reproducibility of the necessary laws for welding current when the welding contact resistance changes during the welding. The influence of the contact resistance on the area of stability is graphically shown. References 10, figures 4.

Key words: micro resistance welding, pulse-width converter, modular structure, automatic control, stability.

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