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THE STUDY OF ELECTROMAGNETIC PROCESSES IN POWER SUPPLY FOR AC ARC WELDING

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Abstract

The electromagnetic processes in electrical circuit of power supply for AC arc welding and particularities of welding current regulation circuit operation were studied. The timing diagrams of currents and voltages, which visually illustrated electromagnetic processes in the circuit and the effectiveness and smoothness of regulation, were depicted. The range of variation of electronic switches opening angle was found and the diagram set of welding currents at

different regulation angles was obtained. References 2, figures 2.

Key words: power supply, arc welding, alternative current, electromagnetic process.

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References

1. Paton B.Ye. Welding power supplies with pulse stabilization. Kiev: Ekotekhnologii, 2007. 248 p. (Rus)
2. Andrianov A.A., Sydorets V.N. Optimization of AC welding arc stabilization modes. *Electrical engineering & Electromechanics* . 2009. No 2. P. 5–8. (Rus)

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