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EFFICIENT OPERATING CONDITIONS OF INDUCTION MOTORS FOR PISTON COMPRESSORS WITH FREQUENCY REGULATION

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Abstract

The influence of periodic load on pulsations of electromagnetic torque and rotational speed, the losses and the efficiency of frequency-controlled induction motors for single-cylinder piston compressors are investigated using computer modeling. The region of critical reduction of motor efficiency when changing the frequency and supply voltage and the loading degree are determined using the criterion of heavy quasi-static regimes. References 16, figures 7, tables 2.

Key words: induction motors, frequency control, single-cylinder piston compressors, pulsations, efficiency.

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