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MODIFICATION OF THE CRITERION OF THE PRESENT EXPENSES FOR THE DESIGN OF ENERGY-SAVING INDUCTION MOTORS

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Abstract

Modification of the criterion of the present expenses consists in use of coefficient of significance of exploitation for the coordination of a maximum of an efficiency of the engine and a minimum of the present expenses. In this case, the value of the modified criterion of the present expenses becomes less than the value of the unmodified one. The coefficient of significance of exploitation, which represents a fractional excess of the above expenses over the cost of active energy losses, is proposed to be defined as the ratio of the unmodified present expenses to the cost of active energy losses of the base motor relative to which the energy-saving induction motor is optimized. The analysis of the influence of the the inflation coefficient on the criterion of present expenses is carried out. Its accounting increases the value of the modified criterion of the present expenses. References 9, figures 2, tables 2.

Key words: induction motor, optimization design, criterion of the present expenses, modification of a design criterion, coefficient of significance of exploitation, inflation coefficient.

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