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INFORMATION TECHNOLOGY FOR PROTECTING DIESEL-ELECTRIC STATION RELIABLE OPERATION

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Abstract

The idea of obtaining a quantitative estimation of the identity of the working cycle of a diesel-electric station is proposed on the basis of processing of the frequency-modulated signal of the speed of the crankshaft. The method of measuring fluctuations is developed and on the basis of it the information-measuring device is constructed. As a result of the analysis of the deterministic mathematical model of the kinematic scheme of a diesel-electric station in the form of a mechanical system with ten degrees of will, transfer functions are obtained that establish information communications between the torque moments of the cylinders and the signal of fluctuations. The information technology for assessing the identity of the diesel cycle work cycles is based on the frequency representation of the signal of fluctuations, transfer functions and torques of cylinders. It consists in solving a redefined system of algebraic equations using a

non-solving minimization algorithm. References 18, figures 4, tables 2.

Key words: hardware, computer system, information technology, metrological characteristics, measurement method, frequency-modulated signal.

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