

**APPLICATION OF STATISTICAL METHODS FOR THE EVALUATION  
OF THE CONDITION OF MARINE GAS TURBINE ENGINES  
AND PREDICTING THE TIME OF THEIR FAULTLESS OPERATION**

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**ABSTRACT**

A statistical method of analyzing operational parameters for estimating a current condition of an engine has been presented in the case of a monitoring system of marine gas turbine engine operating in a ship's power system. The method of building and applying multiple regression models for predicting the period of faultless operation of a gas turbine engine, whose previous work record has been taken into account, has been described. Accuracy of assumed models has been estimated. Chosen results have been presented together with the verification of maintenance decisions made on their basis.