Abstract

The purpose of this study is to determine the period of preventive repairs for a gas turbines, to prevent the forced stops and to restore the initial technical state of components. Has this effect we use the renewal theory and the Markov process based on the theory of reliability depending on the results of observation and processing of statistical data of exploitation. Manage the operation of a system designed to achieve a given work is to guarantee the possibility of having the system in operation for a specified period before the preventive repair with high reliability. The quantity of spare parts for this repair, available at the level of the maintenance service, is also to reduce the time of the repairs of the machines. The planning of the period of maintenance work depends on the technical condition of the machines, which the variation in time is a function of the type and of the speed of wear. The maintenance of the machine plays an important role on its reliability i.e. on the state of the machine. To solve the problem of optimization of the frequency of preventive repairs it is necessary to take into account all the factors; deteriorating state (aging, wear, deformation) and the improving (control and testing; prevention and repair.) We suppose that after each maintenance repair, the machine is restored to its original state; t.e. after each repair the frequency between 2 preventive repairs will be again planned on the basis of the deterioration of the state of the machine