THE MODELS FOR DESCRIPTION OF OPERATIONAL CHARACTERISTICS-DEVIATIONS OF VEHICLES

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Abstract

In the course of the operation of vehicles there are many stochastic influences which cannot be examined by means of simple methods at a given level of costs. So, the structural and operational characteristics of vehicles can considerably deviate from the specified values both in an individual and in a cumulative way, and their deviations exceed the given tolerance limits in many cases.

The above mentioned deviations, deviation-combinations, and their influences on the characteristics and performance data of vehicles amount to 5—15% and are to be taken into consideration to ensure the necessary operational safety and the optimal cost level (minimal lifecycle-cost) in the operation. Today, this is one of the most important problems in vehicle operation.

This paper shows the models recommended for the description of operational characteristics — deviations of vehicles. This models were made by using the probability theory and theory of stochastic processes. New models can be made by using catastrophe theory and chaos.

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