ABSTRACTS OF PH.D. THESES

Selected abstracts of Ph.D. theses submitted at Russian University of Transport

Aliev, O. T. Improving the safety of production processes on the basis of improving the system of training of locomotive crews. Abstract of Ph.D. (Eng) thesis. Moscow, 2017, 24 p.

In the thesis the main factors of the production environment of locomotive crews that determine the safety of working conditions, psychophysiological features of the microclimate on the railways of Uzbekistan are investigated. In this case, the individual indicator of chronoreflexometry is defined as the most adequately characterizing the implementation of the operator functions of the locomotive crew, an algorithm for testing vocational training (including knowledge of safety rules), a methodology for assessing the effectiveness of computer simulators with adaptive training programs for locomotive crews.

Grinchar, N. N. Complex evaluation of technical re-equipment projects in transport taking into account economic risks. Abstract of Ph.D. (Economics) thesis. Moscow, 2017, 24 p.

The author has improved the methodology for estimating the cost of the life cycle of machines during technical re-equipment, taking into account the factors of uncertainty and risk. It is proposed to use, in particular, the method of fuzzy logic using the Mamdani algorithm to determine the level of optimism in the economic justification of projects, as well as the integral coefficient of resistance to risks. A methodical approach to making decisions on technical updating of transport production is presented on the basis of the risk levels developed by the competitor and the mechanism of applying cognitive maps.

Lobanov, I. I. Increase of operational efficiency of diesel locomotives using the means of operational diagnostics. Abstract of Ph.D. (Eng) thesis. Moscow, 2017, 22 p.

In the course of the study, a method was developed and the criteria for evaluating the diagnostic parameters of the diesel working process and the technical state of the fuel equipment assemblies, the gas distribution mechanism and the cylinder-piston group were developed. The method of operative control of diesel engines helps to implement a diagnostic kit that includes a monitoring system for diesel engines, a mechanotester of fuel assemblies and a cylinder tightness analyzer. The modes of operation of diesel engines are determined, on which the greatest informativity of diagnostics is achieved.

Meshcheryakov, D. A. Management of the efficiency of the vehicle manufacturer. Abstract of Ph.D. (Economics) thesis. Moscow, 2017, 24 p.

The dissertation analysis allowed to establish the economic content of investment management relations with the structure and dynamics of costs of the main production of the vehicle manufacturer company and at the customer enterprises. Models and algorithms for constructing and using this management accounting system with the aim of increasing the efficiency of investment decisions are proposed. Experimental calculations based on the data of OJSC TMH confirmed the validity of the proposed methodological provisions.

Shatalova, E. P. Economic justification of the process of examination of project documentation in the investment cycle. Abstract of Ph.D. (Economics) thesis. Moscow, 2017, 24 p.

The possibility of optimization of the process of passing the expertise of project documentation for facilities financed from the funds of federal departmental structures is substantiated. With the use of network planning tools, the factors governing the process of examination, influencing the investment cycle period, are determined. The order of an estimation of quality of services of expert institutions at carrying out of examination of the design documentation and results of engineering researches is offered.

Ushakov, A. Yu. Calculation of compressed-bent elastic plates and solution of problems of their stability by the method of initial functions. Abstract of Ph.D. (Eng) thesis. Moscow, 2017, 24 p.

The author has constructed a new matrix of initial functions for the calculation of compressed-bent plates, in which the force perpendicular to the original undeformed middle plane of the plate is adopted as the dimensionless amount of the shear force, which makes it easier to satisfy the boundary conditions on the support-free edges in the presence of a compressive force. A new property of generalized orthogonality for the case of bending of a plate with various boundary conditions is obtained. ●