

## ABSTRACTS OF PH.D. THESES

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

**Kalachev, M. A. Economic substantiation of the system of railway infrastructure project management Abstract of Ph.D. (Economics) thesis. Moscow, 2017, 24 p.**

The study systemized elements of organization and economic mechanism of implementation of the high-speed rail projects that involve participants with common commercial and national interests, emphasized the key role of public authorities in that cooperation. The author substantiated the use of integral hierarchic criterion, that considers risk factors influencing innovation development, suggested a methodological approach based on ranking of the indices of the management system at the first stage of the life cycle of a project.

**Kasumov, A. Sh. Foam concrete with enhance operation features. Abstract of Ph.D. (Eng) thesis. Moscow, 2017, 24 p.**

The study describes the development of rationally dispersed composition of not steam-and-pressure cured modified foam concrete. Enhanced operation features of the concrete were achieved thanks to multilayer optimal reinforcement with particles of solid components with minimum width of an interlayer of cement rock, thus allowing mostly constrained conditions during formation of the structure of stiff intercell partition walls with high concentration of the solid phase in a volume unit. The author obtained mathematical models permitting to correct and revise composition of foam concrete depending on the quantity of finely dispersed slag and on the features of a given complex modifier.

**Merkulov, D. A. Composite building materials based on polyester resin PN-609–21M. Abstract of Ph.D. (Eng) thesis. Saransk, 2017, 26 p.**

The study determined the dependencies in changes of the features of polyester composite materials with resin PN-609–21M after keeping it in biologically aggressive media, developed types of those composite materials that have enhanced resistance features to microbial and microbial metabolites attacks. The author developed rational compositions and revealed physical and engineering properties of paint-and-

varnish, mastic and carcass composite materials with polyester binding agents.

**Sheptukhina, Yu. A. Methods of management of competitiveness of railway infrastructure company. Abstract of Ph.D. (Economics) thesis. Moscow, 2017, 24 p.**

The thesis identified groups of factors influencing the competitiveness of a company, singularized methods of managing factors which are critically important for competitiveness of a company while choosing investment priorities regarding infrastructure projects. The author developed methods of assessment of risks of losing of competitiveness if volume of funding of development of traction units of an infrastructure company is insufficient. The thesis suggested a model of assignment of a limited volume of investment funds considering targeted management of risks which are critically important for competitiveness.

**Smirnov, I. V. Modelling of mechanical-and-physical properties and climatic resistance of composite epoxy materials Abstract of Ph.D. (Eng) thesis. Saransk, 2017, 24 p.**

The study revealed the level of destruction of cement rock in concrete and reinforced concrete structures and of destruction of their polymer coatings depending on orientation and location of the elements and on the origin of aggressive impact on the materials along the height of the structure. The developed model serves a basis to suggest calculation formulas suitable for developing of composite materials with minimum structural tensions. The dynamics tests proved that carcass polymer concrete possesses high impact strength and is able, while being used as protective coating, to resist both dynamic loading and aggressive environment.

**Zavialova, N. F. Economic assessment of effectiveness of the operation of technical facilities of the entities of transport holding company. Abstract of Ph.D. (Economics) thesis. Moscow, 2017, 24 p.**

The study identified the parameters of industrial processes for calculation of the components of output per unit of capital funds, proved the dependence of the operation of technical facilities on their renewal, facilitating objectivity and completeness of economic substantiation of feasibility of corporate investment and innovation projects. A set of methods was suggested allowing to assess project decisions, taking into account the indices of capital efficiency and of the operation of technical capacity of a transport holding company, particularly regarding different business activities. ●