
Describes the results of systematization of history of creating mixed river–sea ships, their classification, role and meaning in water transport system.

\textbf{Key words:} projecting, new generation of mixed river–ships, inland water ways, regions of shipping, classification, safety of navigation.

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Describes the regularities of re-formation of a complex branched river section. Substantiates measures to stabilize local route of waterway and principles of their implementation.

\textbf{Key words:} Lena river, «razboy» Rassoloda, riverbed regime, waterway, waterway.

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Analyses modern situation and trends in classification of vessels with taking into account their size, gross capacity, conditions (areas) for navigation, technical condition.

\textbf{Key words:} small vessel, sub standard vessel, classification.

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Shows the results of statistic analysis of mixed river-sea vessels exploitation along the Northern sea route for 2019: vessel types, routes, cargoes.

\textbf{Key words:} Northern sea route, mixed river-sea ships, river shipping companies.

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Describes the principles of creation digital platform for the purpose of improving and development activities of classification and examination of ships.

\textbf{Key words:} digital platform, classification and examination of ships, Russian River Register.

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Makes analysis of stress-strain state of lifting structure, with taking into account additional loads, based on methods, strength calculations for permissible stresses and finite element method. Describes the author’s design scheme, solid-deformed model and calculation by finite element method in a CAD/CAE system.
Key words: lifting structure, metal construction, stress-strain state, finite element method, modeling.
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Describes the authors’ software which simply integrates into existing and perspective automatic control systems of enterprise and created to control (identification, analysis, estimation of importance) production risks at shipyard for the purpose of substantiation management decisions. Shows the example of application for assembly and welding shop.
Key words: computer program, register, management decisions, production risk management system.
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Describes the results of experimental study of diesel \( \Pi \) 10,5/12 which works on anhydrous fuel, coarse and microheterogenic emulsions of diesel fuel with water with concentrations 5 and 15\% for the purpose of decreasing emissions of harmful substances with exhaust gases.
Key words: water-fuel emulsion, diesel, decreasing harmful emissions.
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Describes principle and calculation scheme for cargo transportations to polar region.
Key words: cargo delivery, transport, logistics, scheme, calculation.
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