

ANNOTATIONS
of science works published in professional magazine
«River transport (XXI st century)» № 1(117)'2026

The analysis of influence of fleet's age and technical condition on indicators of transport incidents / V. Kashina, E. Burmistrov, I. Grigoriev // River transport (XXIst century), 2026. – № 1 (117). – p. 31-35.

Shows the results of analysis of transport incidents with ships in marine areas and inland waterways of Russian Federation in 2021-2025 with accent on circumstances and causes. Researches influence of fleet's technical condition (malfunctions of ship devices, mechanisms, systems and design defects) and its age indicators of transport incidents. Investigates cases that led to ship sinking or its damage.

Key words: shipping safety, ship's age, technical condition, accidents, inland waterways, and transportation incidents.

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About realization of potential of Ob-Yenisei waterway / A. Lesnykh, E. Lesnykh, A. Dmitrienko, N. Buryanina // River transport (XXIst century), 2026. – № 1 (117). – p. 36-38.

Describes brief history, current state and prospects of realization of potential of Ob-Yenisei waterway. Pays attention to development of cargo transportation, including direction to Northern sea route, shipbuilding and tourism.

Key words: Ob-Yenisei waterway, cargo transportations, Northern sea route, shipbuilding, tourism.

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The methodology for assessing pre-defective condition of elements of ship mechanical equipment during repair by surfacing technology / K. Karazanov // River transport (XXIst century), 2026. – № 1 (117). – p. 40-42.

Describes the procedure of ultrasonic control of micro-damages (which emerge in zones of thermal and mechanical impact in main metal from operational loads) restored by surfacing technology of parts of ship mechanical equipment for pre-defective condition of material.

Key words: ship mechanical equipment, surfacing technology, pre-defective condition, ultrasonic control.

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The methodological support for information system to construct graph of multi-arm section of river / S. Motorin, A. Botvinkov, N. Rykovskiy, K. Katkovskaya, A. Motorin // River transport (XXIst century). 2026. – № 1(117). – p. 42-45.

Describes the author's methodology to construct incidence matrix for multi-arm section of the river. Offering principle intended to eliminate errors of track engineer, to automate process of graph drawing and to optimize calculation of water consumption along the arms.

Key words: method, river, multi-armedness, water consumption, graph, incidence matrix, information system.

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The research of using hydrogen-containing gas additive in diesel fuel to reduce harmful emissions from ship engine / A. Tolmachev, I. Shvetsov, E. Gubin, S. Ivanchik, N. Guzenko, G. Yur // River transport (XXIst century), 2026. – № 1 (117). – p. 45-48.

Shows the results of comparative tests by speed characteristic of Ch10.5/12 engine on waterless diesel fuel, crude water-fuel emulsion and emulsion with hydrogen-containing gas additive.

Key words: ship diesel, harmful emissions, water-fuel emulsion, hydrogen-containing gas additive, ecology.

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The algorithm to consider features of providing navigation safety in port area when using unmanned tugboats in mooring operations / A. Butsanets, V. Karetnikov, V. Semenov // River transport (XXIst century), 2026. – № 1 (117). – p. 48-51.

Describes the author's algorithm to develop safety management system for unmanned tugs. Approach allows to consider new risks which occur during mooring operations process in port areas by using such vessels. Offered principle implies using elements of expert assessment method to get solution in conditions of absence of necessary statistical data.

Key words: unmanned tug, mooring operations, navigation, safety management system.

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About fleet's energy efficiency / A. Lisin, N. Ishutova, I. Grishanin // River transport (XXIst century), 2026. – № 1 (117). – p. 52.

Describes variants of optimization of fleet's energy consumption during cargo transportation in order to improve its economic performance, provide safety and minimize negative impact on environment.

Key words: fleet, cargo transportations, route optimization, energy efficiency.

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Drainage systems for ships: features, problems and directions of improvement / S. Mohammad, V. Avtsin, I. Malygin, E. Kharitonov // River transport (XXIst century), 2026. – № 1 (117). – p. 53-56.

Describes the features, problems and directions of improvement of drainage systems for ships. Pays attention to automation issues, increasing energy efficiency and environmental friendliness.

Key words: ship, drainage system, automation, energy efficiency, environmental friendliness.

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The modernization of oil loading barge «Bel'skaya-69» pr.R27 / S. Girin, A. Gusev, S. Sozinov // River transport (XXIst century), 2026. – № 1 (117). – p. 56-57.

Suggests the author's version of the conversion (by using composite materials) of «Bel'skaya-69» barge pr.R27 from oil tanker to platform barge in order to save existing deck structure, significantly reduce metal consumption and financial costs.

Key words: oil tanker barge, modernization, platform barge, composite structure.

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