

ANNOTATIONS
of science works published in professional magazine
«River transport (XXIst century)» № 3(119)'2026

The perspective ways for development of regional port infrastructure (on the example of Samara region) / T. Novikova, S. Mitroshin, M. Luchkova // River transport (XXIst century), 2026. – № 3 (119). – p.18-23.

Describes perspective ways for development of port infrastructure in Samara region as a strategic participant of North-South international transport corridor. Analyses current state of regional river ports, estimates possibility of applying conceptual approach to improve material-technical base and realization of technology «smart port» with definition of economical effectiveness.

Keywords: Samara region, port infrastructure, development, intelligent systems, «smart port», effectiveness.

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The intensification of shipping on «small» rivers – a significant impulse for development of Russia's regions / S. Gordleev, L. Lapshin, I. Grigoryev // River transport (XXIst century), 2026. – № 3 (119). – p.23-26.

Substantiates rationality of intensifying shipping on «small» rivers for the purpose of promoting economical and social development of surrounding territories. Considers various scenarios.

Keywords: «small» rivers, shipping, regions, development, effectiveness.

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Morphodynamics and permafrost conditions of estuarine bar of river Yana and their influence on condition of shipping route / A. Zavadskiy, R. Chalov, A. Sakharov, D. Botavin // River transport (XXIst century), 2026. – № 3 (119). – p.32-36.

Establishes patterns of distribution of permafrost and seasonal frost in navigable Zamanikha furrow. Substantiates variants for optimization of fairway position in limiting section with taking into account conditions of layering of frozen and thawed soils, which make it possible to reduce volume of frozen soil excavation by 2-3 times compared to current dredging volumes.

Key words: river Yana, estuarine bar, water way, shipping, optimization.

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Application of logical-probabilistic approach to formation of comprehensive method to justify off-port fleet processing / A. Kirichenko, D. Turov // River transport (XXIst century), 2026. – № 3 (119). – p.36-41.

Describes comprehensive method to justify choice of off-port ships processing technologies, aimed on conditions of Arctic zone of Russian and roadstead operations in limited water areas. Pays special attention for combined technologies, where risk is calculated as a product of failure probabilities of independent subsystems.

Key words: «northern delivery», off-port ships processing, logical-probabilistic modelling, risk management, multi-criteria analysis.

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Model-algorithmic support for procedure of assessing technical condition of the ship's metal hull / D. Kirsanova, A. Solovyev, Y. Fedosenko // River transport (XXIst century), 2026. – № 3 (119). – p.41-43.

Shows the author's concept for construction of model-algorithmic support for digital decision support system intended for assessing technical condition of ship's metal hull.

Key words: ship's hull, technical condition, assessment, analytic hierarchy process, expert scale.

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Current state and technological problems of bulk cargo handling at general-purpose terminals of seaports in Russia / A.Sokolov, I.Sokolova, V.Karetnikov, V.Semenov // River transport (XXIst century), 2026. – № 3 (119). – p.43-47.

Shows the results of analysis of technological problems of traditional schemes of bulk cargo handling at general-purpose terminals of seaports in Russia, their systematization into matrix by five groups. Formulates criterias for transition to container-oriented handling technology.

Key words: seaport, bulk cargo, general-purpose terminal, container-oriented technology.

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Integrated assessment of factors which influence on designn of intra-city passenger water route / V. Karetnikov, E. Krotovskaya // River transport (XXIst century), 2026. – № 3 (119). – p.47-51.

Describes various methods that can be employed to establish route network for water transport; analyses their advantages and disadvantages. Offers integrated assessment of factors which influence on design of route lines with taking into account distinctive characteristics of water transport.

Key words: water transport, passenger transportations, transport network, graph theory, integrated factor assessment.

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Using of alternative heavy fuels in ship high speed diesel engines: problems and their solutions / I. Volodin, S. Titov, G. Yur // River transport (XXIst century), 2026. – № 3 (119). – p.51-53.

Shows the results of experimental study of working process of high-speed diesel engine Ch 15/18 on boiler oil as alternative fuel; application of third-generation combustion chamber in pulsation combustion mode using intra-drip cavitation; calculations of rate of destruction during cavitation of surfaces of cast iron, steel and experimental alloy.

Key words: high speed diesel engine, heavy fuel, combustion chamber, pulsation combustion, intra-drip cavitation, abrasive wear.

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The research of cold resistance of welded joints / M. Menzilova, O. Lebedev, N. Shtykin, K. Nosyrev // River transport (XXIst century), 2026. – № 3 (119). – p.53-57.

Shows the results of tests of welding wire without copper coating and with it for cold resistance and strength in ice conditions, in accordance with the requirements of the Rules of Russian classification society and GOST 9454-78, which include set of non destructive testing methods.

Key words: welded joint, cold resistance, tests, aggressive environment.

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Comparative analysis of efficiency of using alternative fuels in main ship diesel engines to ensure environmental safety and energy efficiency / S. Istomin, V. Gusakov, D. Tel'tsov, S. Andryushchenko, D. Sibrikov, O. Lebedev, B. Lebedev // River transport (XXIst century), 2026. – № 3 (119). – p.58-60.

Shows the results of comparative analysis of physicochemical and motor properties of promising types of alternative fuels to assess patterns of their influence on operational and environmental characteristics of ship internal combustion engines. Identifies key patterns of changes in operating process, systematizes technical solutions for adaptation fuel equipment.

Key words: ship diesel, alternative fuel, performance characteristics, efficiency, environmental friendliness.

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