

ANNOTATIONS
of science works published in professional magazine
«River transport (XXIst century)» 3(103)'2022

About the river transport's role in the system of «northern delivery» / S. Maslennikov, M. Sinitsyn // River transport (XXI st century). 2022. – № 3 (103). – p. 31-34.

Analyses current situation with organization of «northern delivery», cargo traffic and variants of its increasing; estimates the role of river transport. Describes the results of authors' researches.

Key words: «northern delivery», river transport.

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Maintenance of ship's courses in conditions of extended navigation (on the example of Lower Volga) / P. Belyakov, S. Konopatsky, P. Rzhakovskaya // River transport (XXI st century). 2022. – № 3 (103). – p. 35-36.

Analyses possibility of maintaining ship's courses on Lower Volga while extended navigation (ice conditions, subzero air temperature).

Keywords: ship's course, extended navigation, Lower Volga.

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Microscopic researches of paint coatings for ship's hull / O. Lebedev, M. Menzilova, I. Rozov, E. Solntseva // River transport (XXI st century). 2022. – № 3 (103). – p. 38-41.

Analyses influence of external factors on condition of various paint coatings of metal plates which imitate ship's hull and results of their investigation by optical microscopy.

Key words: paint coatings, ship's hull, external influence, optical microscopy.

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Laser treatment as a method of increasing antifriction properties of grey cast iron parts in ship engine / D. Sibrikov, S. Ivanchik, E. Gubin, S. Andryshenko, A. Gys'kov, K. Milevskiy, I. Ivanchik, K. Zubashevskiy // River transport (XXI st century). 2022. – № 3 (103). – p. 41-44.

Analyses conditions which reduce lubrication efficiency of ship engine's cylinder-piston group elements. For improving machine's operational parameters describes options to reduce friction power losses.

Key words: ship engine, cylinder-piston group, antifriction properties, tribotechnics, laser treatment.

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The concept of game simulator for information security on river transport / M. Kardakova, A. Nyrkov, Y. Tsymay // River transport (XXI st century). 2022. – № 3 (103). – p. 45-49.

Describes possibility of using game simulator in training process; concept of simulator, its interface and used mechanics. Calculates risk of emergency on ship and variants to take this calculation in consideration in simulator.

Key words: river transport, simulator, training, risk.

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Forecasting of oil spills from ships (on the example of river Amur near Khabarovsk city) / A. Plastinin, A. Kalenkov // River transport (XXI st century). 2022. – № 3 (103). – p. 50-52.

Describes the results of forecasting of oil pollution spread on river Amur near Khabarovsk city in low-water conditions. Shows created maps of emergency situations which indicate properties of spill oil; regression dependencies to estimate length and width of oil slicks, length of polluted coast.

Key words: environmental safety, oil spills, forecasting, river Amur.

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Planning operation of tugboats with shoulder method of handling / A. Kirichenko, A. Kuznetsov, V. Bogoslovskiy, A. Zhidkova // River transport (XXI st century). 2022. – № 3 (103). – p. 53-54.

Describes issues of optimal planning operation for linear tugs to develop cargo flows at base point during interaction with mainline modes of transport within limited river basin.

Key words: barge towing structure, methods of handling tugs, placement task.

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Measuring of ship shafting vibrations in exploitation by the method of non-contact phase-metric / A. Paschenko, A. Rodionov, E. Burmistrov // River transport (XXI st century). 2022. – № 3 (103). – p. 55-57.

Describes fundamental possibility of using a non-contact phase-metric method for measuring shafting vibrations on a ship in real time. Analyses obtained results with the help of Fourier transform.

Key words: shafting, phase-metric method for measuring.

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Prospective direction of optimization of ship diesel import substitution / V. Peshkov, N. Vasilyev, M. Toropov, Y. Matveev // River transport (XXI st century). 2022. – № 3 (103). – p. 58-60.

Describes the concept of improving ship's propulsion system with the help of a star-shaped diesel engine coupled with a propulsive steering column.

Keywords: star-shaped (radial) diesel, propulsion and steering column, propulsive complex.

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