

ANNOTATIONS
of science works published in professional magazine
«River transport (XXIst century)» 4(112)'2024

Applying computer game format to improve study process for students at water transport universities (on the example of visualization of phenomenon of initial stability of vessel in framework of study of discipline «Ship theory») / Y. Kochnev, I. Kochneva // River transport (XXIst century), 2024. – № 4 (112). – p. 27-29.

Describes the features of the author's mathematical model of vessel realized in computer 3D game, which by interactive format allows to improve study process. As an illustrative example shows phenomenon of initial stability of vessel which studies in specialty «Design and construction of ships, vessels and ocean engineering facilities» within the framework of discipline «Ship theory».

Key words: mathematical model, computer game, interactive format, ship theory, initial stability, study.

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Rational logistics as a prerequisite for redirecting cargo flows to river transport / A. Nichiporouk, O. Kartashova, P. Zadrovsky // River transport (XXIst century), 2024. – № 4 (112). – p. 29-32.

Formulates proposals to improve interaction between river ports, cargo owners and other participants in cargo transportation process. Justifies organizational and logistical tasks for redirecting a part of cargo flows to river transport.

Key words: cargo transportations, river ports, logistics, redirecting cargo flows.

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The comparative study about influence of towed object's yawing on tow rope's tension / K. Ushakov, V. Nikolaeva, E. Marushkina // River transport (XXIst century), 2024. – № 4 (112). – p. 33-35.

Presents the description and the results of physical modeling of towing process by using small models – rectangular pontoon and self-propelled vessels with propulsion and steering complex; of comparison between towing behind trolley moving with constant speed and self-propelled model; of study about effect of jets of the tug's propellers on water resistance of towed object.

Key words: towing, ship, towing tests, towline, course stability.

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River shipping and water ways in Saint-Petersburg: problems and solutions // N. Ershikov, A. Sazonova, A. Gubina, N. Legostaeva // River transport (XXIst century), 2024. – № 4 (112). – p. 36-38.

Analyses modern state of water ways and river shipping in Saint-Petersburg. Estimates possibility of development of river passenger transportations as a structure element of urban transport system. Suggests variants of routs of river tram.

Key words: urban transport, river fleet, passenger transportations, Saint-Petersburg.

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Minimizing influence of ice fields as a factor decreasing shipping safety // N. Fomicheva, O. Spirenkova, A. Tushina // River transport (XXIst century), 2024. – № 4 (112). – p. 40-43.

In order to provide safety of river shipping suggests the authors' method to calculate the fracture of ice fields on a concentrated difference formed on an auxiliary threshold in front of the main spillway.

Key words: shipping safety, water way, low-pressure unit design, ice fields.

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The technology of creating spheroidized particles (tungsten carbide with cobalt and chromium) as a lubrication additives in sliding bearings of ship mechanisms / S. Ivanchik // River transport (XXIst century), 2024. – № 4 (112). – p. 43-44.

Shows the results of research to create fine-grained powder of tungsten carbide with cobalt and chromium as an additive to oil in sliding bearings of ship mechanisms.

Key words: friction, sliding bearing, motor oil, additive, spheroidized particles.

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The review and the analysis of features of hydrological regime of Selenga river / T. Pilipenko, V. Belyaeva, D. Revazov // River transport (XXIst century), 2024. – № 4 (112). – p. 44-46.

Presents the review and the results of analysis of hydrological regime of Selenga river.

Key words: hydrological regime, Selenga river.

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The methods of optimization fuel consumption on the fleet: the analysis of existing principles and the authors' approach / S. Istomin, O. Lebedev, B. Lebedev, V. Gusakov, S. Andryuschenko // River transport (XXIst century), 2024. – № 4 (112). – p. 46-47.

Describes advantages and disadvantages of existing methods of measuring fuel consumption on a ship. Suggests the authors' approach implying to use artificial intelligence.

Key words: water transport, economical efficiency, fuel consumption, measuring methods, optimization.

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Creating the method of calculation of different by types and construction of propulsion devices by using chart in coordinates $\xi-K_Q^{1/3}$ / Z. Kagan, D. Kagan // River transport (XXIst century), 2024. – № 4 (112). – p. 47-56.

Presents detailed definition description of the author's calculation chart in coordinates $\xi-K_Q^{1/3}$ for showing characteristics and possibilities to define main parameters of certain serial model of propulsion device.

Key words: shipbuilding, design, propulsion device, method of calculation, chart.

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