



## ANNOTATIONS

**The automatic control system for locking process on svirsky shipping gateways / F. Gelver, I. Belousov, V. Samoseyko, N. Belousova // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 25-29.**

Describes the experience of designing, developing, implementing and operating automatic control system for mechanisms and locking process on Nizhne- and Verkhne-Svirsky shipping gateways, based on national soft- and hardware production.

**Key words:** automatic control system, shipping lock (Nizhne- and Verkhne-Svirsky), ship-passing.

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**Engineering extreme flood protection on the Black sea coast and North Caucasus rivers / M. Kolosov, N. Selezneva // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 33-36.**

Describes the river flood impact on riverbed and populated areas. Substantiates insufficiency of riverbed clearing for increasing capacity of watercourse and shortcomings of river dike's impact on the channel. Shows the scheme for delaying floodwaters in their formation zone with location of flood protection dams (rapids) on tributaries.

**Keywords:** flood, flood protection program, sedimentary control, flooding of settlements, zones of flood formations, pre-dosed water discharge, rainfall runoff, lateral inflow.

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**The estimation of logistical costs while Northern sea route exploitation / M. Zelenkov // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 40-43.**

Shows the results of general analysis of logistical costs of Northern sea route's transport system. Suggests approaches for improving key parameters. Substantiates perspectives of the route.

**Key words:** Northern sea route, logistical costs, commercial exploitation.

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**Basic parameters of system of shipping lock chamber's filling from under lifting-lowering gates with cylindrical water outlets / A. Gapeev, K. Morgunov // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 43-45.**

Describes the results of analysis of changes main parameters of system of shipping lock chamber's filling from under segmental lifting-lowering gates implemented on channel named after Moscow.

**Key words:** shipping lock, chamber filling system, blanking chamber, cylindrical water outlets, segmental lifting-lowering gates, screen and beam dampers.

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**The calculation of dynamic drawdown of tugboat with barge / A. Klementyev, M. Churin // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 46-48.**

Describes the phenomenon of dynamic drawdown of tugboat with barge while moving on shallow water. Analysis existing methods for defining this parameter.

**Key words:** dynamic drawdown, tugboat with barge, shallow water.

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**The estimation of necessary materials on different stages of ship's life cycle / I. Kochneva, Y. Kochnev // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 49-51.**

Analyses documents in table format for optimization full-range accounting of materials which are used in vessel's repair and exploitation processes and are also apply in new shipbuilding.

**Key words:** recycling, ship's life cycle, ecological safety, estimation of materials.

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**The algorithm of trip planning with taking into account weather and tidal-ebb streams / M. Osokin // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 52-54.**

Describes the algorithm of trip planning with taking into account weather and tidal-ebb streams. Shows examples of choosing optimal routes.

**Key words:** weather conditions, streams, fleet, planning, trip, route.

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**Basic principles for creating algorithms of control unmanned ship in port's water area / V. Karetnikov, S. Rudykh, A. Butsanets // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 55-57.**

Describes main principles for creating algorithms of control unmanned vessel's work based on three-tier system.

**Key words:** unmanned vessel, system of control, remote control, trajectory of movement, unmanned navigation.

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**The skill of rendering first aid as an important factor of decreasing traumatism on water transport / E. Pakhomov // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 57-58.**

Describes the question of decreasing traumatism on water transport, makes an accent on importance of crew training for rendering first aid.

**Key words:** traumatism, first aid, water transport, decreasing risk of trauma.

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**The condition and perspectives of Arctic ports' development / A. Novakov, E. Zhendareva // River transport (XXI<sup>st</sup> century). 2019. – № 2 (90) – p. 59-61.**

Analyses current issues, methods and directions of improving Arctic port's activities, development of their infrastructure and Northern sea route.

**Key words:** Arctic transport system, port infrastructure, Northern sea route.

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