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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Describes the river flood impact on riverbed and populated areas. Substantiates insufficiency of riverbed clearing for increasing capacity of waterscourse and shortcomings of river dye’s impact on the channel. Shows the scheme for delaying floodwaters in their formation zone with location of flood protection dams (rapids) on tributaries.
Key words: flood, flood protection program, sedimentary control, flooding of settlements, zones of flood formation, pre-dosed water discharge, rainfall runoff, lateral inflow.
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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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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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Describes the phenomenon of dynamic drawdown of tugboat with barge while moving on shallow water. Analyses existing methods for defining this parameter.
Key words: dynamic drawdown, tugboat with barge, shallow water.
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Analyses documents in table format for optimization full-range accounting of materials which are used in vessel repairing exploitation and are also apply in new shipbuilding.
Key words: recycling, ship’s life cycle, ecological safety, estimation of materials.
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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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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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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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