

## **The Obligatory Regulations of the Sea Port of Arkhangelsk**

**(Approved by the order of the Ministry of transport of the Russian Federation of July 09, 2014 No.183)**

### **I. Common Rules**

1. The Obligatory regulations of the sea port of Arkhangelsk (hereinafter – the Obligatory regulations) are issued in accordance with the Federal statute of November 08, 2007 No. 261-FZ “Sea ports of the Russian Federation and amendments to the legal acts of the Russian Federation”, the Federal statute of April 30, 1999 No. 81 –FZ “The merchant shipping code of the Russian Federation” and the Common regulations for navigating and laying in the sea ports of the Russian Federation and at approaches to them” (hereinafter – the Common regulations).

2. The following definitions are stated in the present Obligatory regulations: the sea port of Arkhangelsk (hereinafter – the Sea port); the rules for inbound and outbound passages to/from the sea port; measures for safe navigation for inbound/outbound vessels; navigating rules within the harbour; vessel traffic system coverage zone designation and navigation rules within this zone; rules for laying in the sea port with authorized positions; ecological safety and sanitary isolation period compliance guidelines; rules for special communication devices usage within the territory of the sea port and the harbour; data on the sea port borders; data on the A1 and the A2 Global Maritime Distress and Safety System (hereinafter -GMDSS) sea areas; data on technical facilities of the sea port regarding taking vessels in; navigation period information; information on compulsory and non-compulsory pilotage areas; data on depths within the sea port; dangerous goods handling information; data on navigating in ice within the sea port regulations; transmittance of information by shipmasters within the port in the event of any threats of illegal acts or trespasses; meteorological and navigational data transmittance to masters of ships; other information stipulated in the legal acts and statutes of the Russian Federation regulating the merchant shipping sphere.

3. The Present Obligatory regulations are binding for all operating in the sea port vessels and individuals and legal entities regardless their type and ownership.

4. Navigation of vessels within the harbour and at approaches to it and also laying of vessels within the harbour are to be carried out pursuant to the Common regulations and to the present Obligatory regulations.

### **II. The Sea port description**

5. The sea port is situated in the mouth of the Northern Dvina river, which flows to the “Dvinsky” bay of the White sea.

6. The sea port borders are stipulated by the order of the Government of the Russian Federation dated 19 of May 2010 No. 797-R.

7. The following are to be observed in the sea port:

- tidal currents in the Northern Dvina river excluding flood periods;

- ice platformed in the autumn and winter periods with the ice thickness up to 100 centimeters.

8. Navigation within the sea port is to be carried out permanently during the year.

9. The sea port is opened 24 hours a day, there is constant cargo and passenger multilateral the Russian Federation state border checkpoint in the sea port.

10. There are compulsory and non-compulsory pilotage districts within the sea port.

The harbour is the compulsory pilotage district except for non-compulsory pilotage districts.

The non-compulsory pilotage district is situated between the northern border of the sea port area and the line crossing the following coordinates:

Latitude 64°41,6' N, Longitude 039°49,5'E;

Latitude 65°01,1' N, Longitude 040°01,4'E.

Pilot boarding and disembarking position is at the distance of 0,4 nautical mile north-westward from the “Mudyugsky-1” light buoy (Latitude 64°56,8' N, Longitude 040°05,6' E).

11. The sea port is the place of vessels refuge during the storm.
12. The sea port is within the A1 and the A2 GMDSS sea areas.
13. There are facilities in the sea port for cargo handling operations, including operations with dangerous cargo of all categories of danger according to the International Maritime Organization (hereinafter – IMO) classification, and for passengers embarking and disembarking.
14. The purveyance, bunkers, oil and fuel, fresh water supply, waste, oil contaminated waters and all categories of refuse disposal, segregated ballast removal, vessels equipment maintenance and repair, diving survey are available in the sea port.
15. The sea port fairway information is given in the Appendix No. 1 of the present Obligatory regulations.
16. The sea port technical facilities data regarding taking vessels in is given in chapter X and in the Appendix No. 2 of the present Obligatory regulations.
17. The sea port roads information is defined in the Appendix No. 3 of the present Obligatory regulations.
18. Data on very high frequency (hereinafter –VHF) channels used in the sea port is given in the Appendix No. 4 of the present Obligatory regulations.
19. Towage is available in the sea port. Data on the minimal quantity of tugs and their power essential for mooring operations is defined in the Appendix No. 5 of the present Obligatory regulations.
20. Towage is mandatory for mooring operations with vessels which are not equipped with two propellers or thruster.  
For mooring operations vessels with two propellers or thruster can use one tug less then indicated in the Appendix No. 5 of the present Obligatory regulations.  
Vessels are to use not less than two tugs of the power, stated in the Appendix No. 5 of the present Obligatory regulations for the following maneuvers: while mooring adrift or while mooring in a fair wind of more than 10 meters per second, as well as while shifting astern from a berth with subsequent u-turn stern towards the departure direction.  
Vessels of more than 130 meters in length when maneuvering for the purpose of lying on the opposite course in the roads of the sea port except for the outer road “Vneshny reid” are to use not less than one tug of not less than 750 kW tug power.
21. Data on the sea port areas No. 41, 80, 80-A, 109, 110, 135-137, 137-A, 138, 143, 143-A, 144, 144-A, 145-147, 150, 152-165, 166, 167, 169-177, the “Ekonomiya” handling area (hereinafter – HA “Ekonomiya”), the “Bakaritsa” handling area, the deviation ground is defined in the Appendix No. 6 of the present Obligatory regulations.  
In the areas No. 80, 80-A, 109, 110, 166, 167, 169-177 the bottom trawling, underwater and dredging works, explosive works, anchor ground-dragging and anchoring are not allowed.
22. Information on the raft dimensions allowed for towage within the harbour is given in Appendix No. 7 of the present Obligatory regulations.
23. Information on tugs minimal quantity and power required for safe raft towage within the harbour is defined in the Appendix No. 8 of the present Obligatory regulations.
24. During ice-breaker assistance along the Northern Dvina river ice canals regular and temporary pedestrians and vehicle demountable pontoons and crossings (hereinafter ice crossings) are to be equipped. Data on the above mentioned crossings is indicated in the Appendix No. 9 of the present Obligatory regulations.
25. The sea port is included in the list of sea ports of the Russian Federation in which entrances of vessels and other floating crafts with nuclear engineering plants (hereinafter – NEP) and radiation sources (hereinafter – RS) are allowed.
26. Vessels and other floating crafts with NEP and RS are to lay in the “Chizhovsky” road. Data on the “Chizhovsky” road is indicated in the Appendix No. 3 of the present Obligatory regulations.

### **III. Navigating rules for inbound and outbound vessels**

27. Information on ships arrival and departure is to be reported to the Harbour master on

[www.portcall.marinet.ru](http://www.portcall.marinet.ru) internet website.

28. Arrival and departure clearance is available 24 hours a day.

29. There is no arrival and departure clearance for vessels operating handling and supply works for vessels within the harbour and(or) for marine infrastructure objects (hereinafter port fleet vessels).

The authorization for port fleet vessels to navigate within the harbour and for outbound passage during not more than 72 hours with return to the sea port is to be given by the Harbour master for the period not exceeding 90 days. The Authorization validity should not exceed validity of any ships certificates.

30. The authorization above is to be given by the Harbour master on condition if vessel, her hull, machinery and crew complies with the marine navigation safety and with the marine environment pollution protection requirements according to the certificates indicated in the Appendices No.1 and No.2 of the Common regulations, and according to master' (ship owner') or marine agent' declaration with the following data:

IMO number (if applicable);

Vessel's name in Russian and English;

Vessel's call sign;

Maritime Mobile service identity code;

Ship owner and ship operator name and IMO number;

Vessel class (the name of the organization entitled to ships classification and survey which issued the classification certificate);

Ships particulars (type, date of build, gross tonnage, deadweight, length overall, breadth overall, depth, module, draught overall, draught for, draught aft, GMDSS marine area, permitted navigating areas);

Vessel's usage definition;

Crew members' number and their citizenship;

Estimated navigation area;

Restrictions on navigational areas and periods;

Data on ships security;

Sanitary and epidemiological ships' information;

Information on vessels cargo handling gear and other related equipment breakdowns and on any severe incompliances with the safety life at sea, the marine navigation safety, the marine environment pollution from ships protection and the transport safety international regulations;

31. The harbour master authorization is to be formalized in writing. Information from masters'(ship owner') or marine agent' declaration and also on navigating arias and periods restrictions stated for the vessel by the Harbour master, the authorization validity period, the date of issue are to be indicated in the approval above.

32. In case of any changes in the declaration above master (ship owner) or marine agent is to inform the Harbour master for the purpose of issuing a new authorization.

#### **IV. Navigation rules within the sea port.**

33. Navigation and laying in the sea port are to be carried out only with authorization in accordance with ships navigation and position timetable.

Ships navigation and position timetable is to be approved by the Harbour master daily not later than 10.00 a.m. of local time considering ships arrival information, which is to be transferred in accordance with the clause 27 of the Present Obligatory regulations, the timetable is to be published on [www.mapa.ru](http://www.mapa.ru) website.

34. Passage of vessels within the harbour, anchoring and raising anchor operations are governed by the Vessel Traffic System (hereinafter VTS) in accordance with the sea port ships navigation and position timetable. A vessel is to request the VTS authorization prior to passage commencement.

35. The "International Regulations for Preventing Collisions at Sea – 1972" (hereinafter - COLREGS) are to be applied within the harbour.

Intro-port vessels are allowed to carry lights and shapes in accordance with “Regulations for navigating in the inland waterways of the Russian Federation” approved by the Ministry of Transport of the Russian Federation Order dated 14.10.2012 No.129 (registered by the Ministry of Justice of the Russian Federation on 30.12.2002, the registration No 4088), amended by the Ministry of Transport of the Russian Federation Order dated 31.03.2003 No 114 (registered by the Ministry of Justice of the Russian Federation on 07.04.2003, the registration No 4387).

36. The speed of vessels of gross tonnage 500 and greater except dynamically supported high speed vessels (hereinafter HSV) should not exceed 12 knots within the area from the “Mudyugsky -1” light buoy with coordinates: Latitude 64°56,80’ N, Longitude 040°05,60’ E up to the “Lysunovsky” light shape with coordinates: Latitude 64°45,60’ N, Longitude 040°28,80’ E .

37. The speed of vessels except HSV should not exceed 7 knots within the area from the “Lysunovsky” light shape up to the “Krutokolenny” light shape with coordinates: Latitude 64°37,30’ N, Longitude 040°29,20’ E and also in the “Nickolsky” arm of the Northern Dvina River from the “Verkhnekegostrovsky” line up to the mouth of the Laya river.

38. The speed of vessels except HSV should not exceed 6 knots within the area from the “Krutokolenny” light shape with coordinates Latitude 64°37,30’ N, Longitude 040°29,20’ E up to the Latitude 64°36,50’ N parallel of the “Udelninsky” front line shape; in the Kuznechikha river from the “Ekonomiya” handling area in point of the Maimaksa and the Kuznechikha rivers confluence up to the “Rosneft-Arkhangelskneteproduct” reversal area.

39. The speed of vessels except HSV should not exceed 6 knots within the area from the Latitude 64°36,50’ N parallel of the “Udelninsky” front line shape up to the City road and within the harbour zone between railway and highway bridges of the Northern Dvina river.

40. The HSV should navigate in displacement position with the speed of not more than:

- 10 knots in the Maimaksa river and in the “Verkhne-Bakaritsky”, the “Krasnoflotsky”, the City, the “Solombalsky” and the “Chizhovsky” roads of the sea port;
- 16 knots in the rest of the harbour.

41. The HSV in non-displacement position in good visibility and at day time should proceed with a safe speed.

The HSV should navigate in displacement position with the speed of not more than indicated in the items 36-39 of the present Obligatory Regulations when the visibility is of less than one nautical mile at a day time and at any visibility at night time.

42. The following categories of vessels are not subject to the compulsory pilotage:

- boats, pleasure boats, sport sailing vessels;
- small tonnage sea cargo vessels and intra-port vessels of less than 500 gross tonnage;
- dredges, scows, dredging vessels;
- ice-breakers based within the sea port;
- passenger ships operating within the sea port;
- port-fleet vessels.

43. The vessels of gross tonnage from 500 up to 3000 without any dangerous goods on board are not subject to the compulsory pilotage in the fairway’ limited sector of the “Mudyugsky” towers line of 5,1 nautical mile in length from the “Mudyugsky-1” light buoy up to the light buoy No. 8 of the left side where a pilot can be boarded while entering the port and disembarked while leaving the port.

44. The followings are forbidden in the sea port:

- navigating in the wind of 17 meters per second and greater;
- navigating in visibility of less than 5 cables, excepting vessels under the compulsory pilotage using VTS recommendations in accordance with the Common regulations;
- navigating of vessels of 100 meters in length and/or greater with dangerous goods onboard in the wind of 14 meters per second and greater;
- towage of vessels and rafts in the wind of 14 meters per second and greater;
- passage of vessels of more than 135 meters in length and of 7,5 meters in draught and/or greater along the “Mudyugsky” towers line in the wind of 14 meters per second and greater;

45. On the main fairway and on the “Murmansky”, the “Nikolsky” arms of the Northern Dvina

river and on the Kuznechikha river fairways, excluding the fairway areas within or adjoining the sea port roads, one way traffic is compulsory for the following vessels:

for vessels with draught and length which are the maximum practical for the fairway;

for self propelled vessels and for towage convoys of more than 50 meters in length, for vessels carrying dangerous goods onboard while navigating the Maimaksa river;

for towage convoys of more than 150 meters in length and of more than 30 meters in width.

46. Vessels of 175 meters in length and greater are allowed to inward and outward passages from the “Mudyugsky No. 1” light buoy to the “Ekonomiya” handling area, excepting ice-breaker assistance period, subject to the following:

if the wind is of not more than 10 meters per second;

if the vessel is in ballast when approaching the “Ekonomiya” handling area in high water;

if turn over and mooring/unmooring are executed by assistance of 3 tugs, which minimal power is indicated in the Appendix No. 5 of the present Obligatory regulations;

if there are no vessels near adjacent berths while berthing to/from;

if berthing portside, astern towards departure;

if leaving the port is executed by assistance of 2 tugs up to the “Ekonomsky” line.

47. Vessels of 175 meters in length and greater, excluding operating in ice-breaker assistance period, are allowed to proceed to the “Mudyugsky No.1” light buoy from the “RN-Arkhangeksknefteproduct” Ltd berths and in the opposite direction provided that:

if the wind is of not more than 10 meters per second;

if turn over and mooring/unmooring are executed by assistance of 2 tugs, which minimal power is indicated in the Appendix No. 5 of the present Obligatory regulations;

if leaving the port is executed by assistance of 2 tugs up to the “Ekonomsky” line.

48. During day time in the “Murmansky” arm area dredging vessels are allowed to navigate up to the ground dump at the “Knevatiy” line fairway.

49. Navigation following the “Nikolsky” arm, the “Shirshinsky” intarjacent, the “Shirshinsky”, the “Krasnoflotsky”, the “Tralbazovsky” approaching, the “Zharovikha” approaching, the “Arhbumovsky” fairways is allowed in day time.

50. Passages under unlifting bridge spans and also in the areas, limited with parallel lines located in 500 meters from bridges axis up and down the stream (hereinafter – the bridge security zone), are allowed for vessels with dimensions which correspond the fairways dimensions necessary for passages above. The dimensions of fairways for passages above are indicated in the Appendix No.10 of the present Obligatory regulations.

51. In the bridge security zone vessels of any types are not allowed:

to approach bridge abutments 10 meters closer, excepting vessels effecting bridge span supervisory and technical services;

to cross the fairway, to heave to, to anchor;

to effect any maneuvers which are not for stabilizing the course for passing the fairway between abutments;

52. In the bridge security zone for safe navigation of towage convoy of more than 150 meters in length, the master of the convoy, considering the sea port meteorological conditions, shall determine the quantity and the power of tugs which are to be used in towage services in accordance with the Appendix No. 5 of the present Obligatory regulations.

53. Fairways under the railway bridge abutments No.3 and No. 4 and under the highway bridge abutments No. 3L and 4L (the central spans) are to be used for the passage of vessels of more than 14 meters in the spar height above the operative waterline. In the periods mentioned in the clause 54 of the present Obligatory regulations the spar height shall not exceed 40 meters.

54. Passage under lifting bridge spans is allowed daily:

under the highway bridge - from 02.40 am to 05.10 am of local time;

under the railway bridge – from 03.00 am to 05.00 am of local time.

55. Lifting of bridges spans for passage of vessels is not allowed:

- in the wind of more than 14 meters per second;

- when the temperature is below 21° C;
  - within 20 calendar days after the end of ice-drifting in the harbour.
56. Passage of vessels under the highway bridge span is not allowed:
- when ebb climb flow speed is of more than 2 knots;
  - for the vessels of more than 135 meters in length;
  - for the vessels of less than 165 meters in length while ice-breaker assistance in the set ice canal;
57. Towage of non-powered floating objects under lifting bridge spans in the wind of more than 7 meters per second and while flooding is to be effected with assistance of not less than two tugs.
58. Passage of self propelled crane under lifting bridge spans is to be executed by a tug assistance.
59. Masters of vessels planning passage under lifting bridges spans should apply the Harbour master for such passage not later than 17.00 pm of local time the day before.
60. The following should be included in the application above: the name of ship, vessel spar height above the operative waterline, vessel's course (up or down the river), the name and power of tugs (in case of tug assistance).
61. If a vessel is not ready for navigation under lifting bridge spans at imposed time, shipmaster should cancel the application (via VTS) not later than 00.30 am of local time of a scheduled day.
62. Vessels waiting for passage under lifting bridge spans are allowed to anchor in the City and in the "Krasnoflotsky" roads and should be ready to proceed under bridges immediately.
63. Shipmasters applying for passage under lifting bridge spans should inform VTS not later than 01.00 am of local time that they are ready to proceed under bridges.
64. Vessels navigating down the stream have priority over vessels navigating up the stream to pass under lifting bridge spans.
65. In case a vessel is late for approaching bridge, vessels traffic order can be changed whereof VTS informs shipmasters on the VHF channel No.14.
66. At 00.30 am of local time of a scheduled day all vessels applied for passage under lifting bridge spans are to maintain the proper use of radio connection on the 14th VHF channel and to follow VTS instructions.
- Masters shall inform VTS about the time of passage under each bridge.
67. Vessels which run out of time to end their passage under bridges in the periods stated by VTS are to anchor in the road appointed by VTS or to remain at the position until the next lift of bridges spans.
68. The bridges spans between the No. 2 and 3 and 4 and 5 abutments are to be used for passage of vessels with the spar height of not more than the height of bridge span from the calculated high waters, indicated in the Appendix No.10 of the present Obligatory regulations.
69. Navigation under the railway bridge abutments No.1 and 2 and No. 5 and 6 is not allowed.
70. Vessels and towage convoys navigating under unlifting railway bridge spans from the "Bakaritsky" arm down the river and in the opposite direction are to pass under the railway bridge between the abutments No.2 and 3, keeping right in regard to the middle of the bridge span.
71. Vessels and towage convoys, navigating under unlifting spans from the "Krasnoflotsky" road down the river and in the opposite direction are to pass under the railway bridge between the abutments No. 4 and 5 keeping right in regard to the middle of the bridge span.
72. In ice breaker assistance period navigation under lifting part of the railway bridge is allowed when the No. 3 and 4 abutments are released from ice.
73. The highway bridge spans across the "Bakaritsky" arm between the abutments No.2L and 3L, No.4L and 5L, No. 6L and 7L are to be used for passage of vessels with the spar height of not more than the height of bridge span from the calculated high waters, indicated in the Appendix No.10 of the present Obligatory regulations.
74. Passage of vessels between the abutments No. 5L and 6L, No. 7L and 8L, No. 8L and 9L of the highway bridge across "Bakaritsky" arm is not allowed.
75. Vessels navigating down the river are to pass under the highway bridge across the "Bakaritsky" arm between the abutments No. 4L and 5L.
76. Tugs with rafts navigating down the river are to follow under the highway bridge across the "Bakaritsky" arm between the abutments No. 2L and 3L.

77. Vessels passing up the stream are to navigate under the highway bridge across the “Bakaritsky” arm between the abutments No. 2L and 3L.
78. Vessels in towage, bunkering vessels, proceeding from the “Bakaritsa” channel down the river are allowed to pass under the highway bridge across the “Bakaritsky” arm between the abutments No. 2L and 3L after reporting VTS on VHF channels and after gaining approval for such passage.
79. Vessels indicated in clause 77 of the present Obligatory regulations are to give way to towage convoys proceeding down the river towards the fairway between the abutments No. 2L and 3L of the highway bridge across the “Bakaritsky” arm.
80. Vessels, navigating at day time to the “Nizhne-Bakaritsky” road from the “Nizhne-Turdeevsky” road and back are allowed to pass between the abutments No. 6L and 7L of the highway bridge across the “Bakaritsky” arm, keeping right in regard to the middle of the bridge span.
81. The highway bridge spans across the main riverbed of the Northern Dvina between the bridge abutments No. 2P and 3P, 3P and 4P, 4P and 5P are to be used for passage of vessels with the spar height of not more than the height of bridge span from the calculated high waters indicated in the Appendix No. 10 of the present Obligatory Regulations.
82. Passage of vessels between the highway bridge abutments No. 6P and 7P, 7P and 8P across the main riverbed of the Northern Dvina is not allowed.
83. Vessels and towage convoys navigating down the river should pass under the highway bridge across the main riverbed of the Northern Dvina between the bridge abutments No. 4P and 5P.
84. Vessels and towage convoys navigating up the river are to pass under the highway bridge across the main riverbed of the Northern Dvina between the bridge abutments No. 3P and 4P.
85. At day time towage convoys of not more than 4 meters in draught are allowed to pass the highway bridge across the main riverbed of the Northern Dvina between the abutments No. 2P and 3P.
86. At day time towage convoys navigating to the “Saw mill No. 3” Ltd laying place for timber rafts storage on open water are allowed to pass the highway bridge across the main riverbed of the Northern Dvina between the abutments No. 5P and 6P.
87. Vessels with the spar height above the operative waterline of not more than the height of bridge span from the calculated high waters indicated in the Appendix No. 10 of the present Obligatory regulations are allowed to pass between the abutments No. 2 and 3 of the highway bridge, pipeline and the railway bridge, located on the Kuznechikha river (hereinafter the “Kuznechevsky” bridges).
88. Passing and overtaking on the fairway between the abutments No. 2 and 3 of the “Kuznechevsky” bridges and on the distance 250 meters closer to the abutments upstream and downstream are not allowed.
89. While approaching to the “Kuznechevsky” bridges from the opposite sides the privilege right to pass under the “Kuznechevsky” bridges spans between the abutments No. 2 and 3 have vessels proceeding by following tidal stream course and in case if the stream is changed - vessels proceeding down the river.
90. In the Maimaksa and the Kuznechiha rivers and in vessels canals of the Northern Dvina estuary simultaneous towage of vessels and of other objects with assistance of one or of more than one tugs is allowed only if the length of such towage convoys is not more than 150 meters and the width is of less than 30 meters.
91. The following is not allowed within the sea port:
- towage alongside if the length of object being towed (the tugee) is greater than 90 meters and the width of both, the tug and the tugee, is greater than 30 meters;
  - push towing by one tug of more than one object subject to the length of such towage convoy is over 135 meters;
  - in the Maimaksa and the Kuznechikha rivers towage of several objects after stern of only one tug, if the length of such towage convoy is greater than 150 meters and the width is of more than 30 meters.
- While navigating in other traffic lanes within the sea port, towage of several tugees (of river barges, pontoons) after stern of only one tug if the total length of such convoys is of more than 250 meters and the total width is of more than 30 meters is not allowed.
92. Timber rafting within the sea port is allowed if lashed or secured by purse net. The initial (original) unlashd timber rafting within the harbour and also lashed timber rafting without tug assistance

are not allowed.

93. Agent (master, ship-owner) of the head tug who leads rafts towing operation shall apply to the Harbour master for approval of each towage and for including it in the traffic and positions timetable. The application is to include:

- raft's dimensions (the length and the width in meters);
- the place of raft's departure and delivery;
- name and power of the leading tug;
- name and power of each supporting tug.

94. 4 hours before scheduled time of entering the sea port VTS informs master of the leading tug on:

- possible restrictions for proceeding rafts towing course;
- weathers in the sea port;
- possibility to run marine vessels proceeding along the sea port channels;
- positions of vessels laying in the roads.

95. While proceeding within the harbour master of the leading tug is to report VTS on:

- time of passage within the harbour commencement;
- time of crossing the check points indicated in the clause 113 of the present Obligatory regulations.
- time of arrival to the scheduled place of rafts laying and time when raft is to be fixed to lay.

Data on rafts laying positions are stated in the Appendix No. 13 of the present Obligatory regulations.

96. Towing of rafts is prohibited in the following cases:

- if the wind is of more than 14 meters per second;
- if unfavorable weather forecast is given for the next 12 hours (the wind is of more than 14 meters per second, fog and others adversed hydro meteorological factors);
- in case of fresh ice appearance;
- from 02.00 am to 05.30 am of local time if passage under lifting bridge spans of the highway and of the railway bridges in the "Bakaritsky" arm and in the "Bakaritsky" channel is scheduled.

Rafts to be formed and secured in such order which is necessary to maintain safe towing.

97. Vessel rendering raft towing or the tug, master of which operates as a leader of such towage (the leading tug), in addition to lights, prescribed by the Rule 24(a) of the COLREG-72, are to carry two blue all round lights with range of not less than one nautical mile, exhibited at ends of the yard of right and left sides of the mast, where masthead lights are installed. Such actions should be taken when there are several ships operating towing and one of the supporting tugs is proceeding after the raft.

Distance between the blue lights stated in the first paragraph of the present clause is to be not less than 1,5 meters.

Master of the leading tug shall decide which of the supporting tugs is to carry lights.

98. Distance between the rafts being towed proceeding in one direction in the "Maimaksa" river is to be of not less than one kilometer; and in other areas within the sea port – of not less than 500 meters.

99. Rafts convoys are allowed to pass the river fairway only if there are no vessels passing at or near.

100. Tugs with rafts are not allowed to overtake other tugs with rafts.

101. If towing vessels have some difficulties in operating a raft, shipmaster of the leading tug is to inform Central Station of VTS and traffic operator, requesting spare tugs.

102. All the tugs assisting towing operation should hold raft in the point of its berthing until the raft is securely fixed to stationary berth mooring devices and until the raft receiver gives permission to shift from the raft.

103. Tugs with devices to catch wreckaged timber are not allowed to approach the channel axle and to impede passage of other vessels.

If while assistance tugs require to enter the canal (the fairway) and when there are vessels at or near which allowed to pass only along this fairway such tugs are to give way for the aforesaid vessels beforehand proceeding out of the canal edge.

In restricted visibility tugs with devices to catch wreckaged timber are to get to the river bank as



close as their draught allows and are to anchor.

104. Boats collecting and clearing up floating timber from the riversides should not interfere other passing vessels.

105. In case of accident with raft as a result of which timber is unlashd, shipmaster of the leading tug is to immediately inform Central Station of VTS and traffic operator service and is to command the supporting tugs to take actions for accident liquidation and mitigation and for timber and raft rigging conservation.

106. Depending on size of wreckaged unlashd timber from towing rafts or from timber rafts laying places on open water traffic operator of the leading tug is obliged to organize and to maintain collecting of unlashd timber by means of proper and/or additional tugs.

## **V. Vessel traffic system operative zone definition and navigation rules within this zone.**

107. Vessel traffic system operates within the harbour.

108. Within the sea port vessels communicate with Central Station of VTS on the VHF channels: 14 (channel of control, calling and communication while navigation), 69 (communication with vessels under radar pilotage), call sign "Arkhangelsk-Radio-17".

109. Within the harbour vessel traffic control is regulated by the Harbour Master on the VHF channels 14 and 16, call sign "Arkhangelsk-Radio-5".

110. Masters of vessels proceeding to the port from the sea are to connect with VTS Central Station at least 2 nautical miles before approaching the sea port borders.

111. Masters of vessels proceeding to the port from inland waterways are to connect with VTS Central Station at least 2 kilometers before the southern border of the harbour.

112. During ice-breaker assistance period shipmasters intending to navigate within the harbour are to notify the Harbour master before 09.30 am of local time of current day and are to report the following information:

the name of vessel;

passage route;

draught fore and aft;

the spar height above the operative waterline at the moment of passing if vessel proceeds under the highway and the railway bridges lifting span;

expected time of vessel readiness for passage.

113. Vessels navigating within the harbour from the "Mudyugsky-No.1" light buoy up to the "Talagi" oil storage base or towards the southern border of the sea port and back are to inform VTS Central Station on the time of crossing of the following points:

the "Mudyugsky-No.1" light buoy

the parallel of the "Mudyug" leading towers after shape (during ice-breaker assistance);

the parallel of the "Lebedinsky" light shape;

the parallel of the "Perekhodnoy" line after shape (the "Chizhovsky" road);

the "Ekonomsky" light buoy;

the crossing points of "Arkhangelsk-radio-5" and "Arkhangelsk-radio-17" responsibility areas;

the mouth of "Povrakula" channel (the "Gidrolizny" plant);

the "Amosovsky" and the "Korabelny" lines crossing points;

the "Moseev" island;

the "Kegostrovsky" buoy (only if proceeding to/from the "Nickolsky" arm);

the railway and the highway bridges.

Vessels indicated in the paragraph one of the present clause are also to report the Harbour Master and VTS on the following:

on emergency anchoring on the fairway or nearby with indication of location coordinates;

on approach to the place of mooring or anchorage;

on completion of mooring, anchoring or raising anchor operations.

During ice-breaker assistance vessels, indicated in the paragraph one of the present clause are to

inform additionally:

- if vessel stuck in ice with indication of her position;
- on the time of passing ice pedestrians and transport crossings.

## **VI. The sea port vessel laying rules and laying positions.**

114. Vessels in the sea port are to lay in roads and at berths. Data on the roads is indicated in the Appendix No.3 of the present Obligatory regulations.

115. The “Chizhovsky” road of the sea port is intended for laying of vessels of less than 175 meters in length and of less than 9,2 meters in draught. Laying of vessels in roads is unfavorable in the Northern and the Northern-West winds.

116. Vessels of more than 130 meters in length anchoring in the “Chizhovsky” road should keep vessel propulsion unit ready for leaving the road when tidal stream is changed.

117. When ice is platformed within the harbour simultaneous laying of two vessels is allowed on each place of anchorage of the “Chizhovsky” road.

118. The place of anchorage No.1 of the “Chizhovsky” road is to be used for laying of vessels of less than 100 meters in length and of less than 7 meters in draught.

The place of anchorage No.2 of the “Chizhovsky” road is to be used for laying of vessels of less than 130 meters in length and of less than 7,5 meters in draught .

The place of anchorage No.3 of the “Chizhovsky” road is to be used for laying of vessels of less than 175 meters in length and of less than 9,2 meters in draught .

The place of anchorage No.4 of the “Chizhovsky” road is to be used for laying of vessels of less than 160 meters in length and of less than 7 meters in draught .

119. The Northern part of the “Solombalsky” road is to be used for laying of vessels of less than 100 meters in length and of less than 5,5 meters in draught .

120. The Southern part of the “Solombalsky” road is to be used for vessels of less than 160 meters in length and of less than 8 meters in draught.

121. In strong northern-west winds there is heavy swell which comes from the “Korabelny” arm to the “Solombalsky” road, which results unsafe anchorage.

122. The “Maimaksansky” timber port road (hereinafter – MTP) to be used for ships of less than 125 meters in length and of less than 6 meters in draught awaiting for laying at berths of MTP, for high water passage along the “Korabelny” line and also for long-term laying.

123. The “Krasnoflotsky” road to be used for vessels of less than 160 meters in length and of less than 8 meters in draught, awaiting for passing under the railway and the highway bridges and for laying at berths of the “Saw mill No.2”, of the “Saw mill No. 3” and of the “Bakaritsa” handling area.

124. The “Zelenetsky” road to be used for laying of ships of less than 120 meters in length and of less than 4,5 meters in draught.

125. The berth’s operator shall inform the harbour master that the berth is ready for mooring one hour before the mooring begins.

126. Laying of more than three vessels alongside at berths within the sea port is prohibited .

Two or three vessels are allowed to lay alongside at berths only after the approval of both, the berth’s operator and the masters of ships engaged.

127. If one of two or three vessels laying alongside at berth is going to leave the berth master of the leaving vessel is to notify masters of other vessel (vessels) and to coordinate with them unshifting and mooring operations not later than two hours before leaving.

128. Shifting and pulling of non-powered objects at or near the side of anchored vessel or of vessel at berth to be rendered only with tug assistance.

129. Laying at berths which are not protected from ice-drifting and in the roads during ice-drifting are not allowed. Data on positions of laying and on the berths that are protected from ice-drifting are indicated in the Appendix No. 12 of the present Obligatory regulations.

130. While mooring, shifting vessels using tug assistance, are to switch for VHF channel that is on tug and to notify VTS. After tug assistance is completed such vessels are to switch back the VHF

channel 14 and to notify VTS.

131. Vessels laying at berths are not allowed:  
to effect mooring tests of main engines;  
to turn on ship's radar station in operating mode;  
to turn off ship's automatic identification system.

132. Shifting to berths is allowed when the wind is of not more than data indicated in clause 44 of the present Obligatory regulations.

133. During ice-drifting on the Northern Dvina river, before thick ice drifts in the port borders, vessels shall be harboured in places of refuge within the sea port, that are protected from strong flood current and ice.

134. Before ice –drifting is in the harbour owners of laying places are to submit to the harbour master the information on positions of vessels laying in the port since winter and on positions of vessels laying in places of refuge pursuant to the ship-owners applications, which (the positions) are imposed for ice-drifting period.

## **VII. The environmental safety and sanitary rules in the sea port.**

135. Oily mixtures, fuel oil residues, wastewaters, garbage are gathered by refuse-removal vessels.

136. Reset of segregated ballast in the sea port is allowed in case it was taken or changed in the White or the Barents seas within the distance of not less than 50 nautical miles from the nearest land and in places where the depth is not less than 200 meters, whereof there is a confirming record in vessel's logbook .

137. Vessel with a detected patient on board, having the symptoms of the serious infectious disease, is to be anchored together with crew, passengers and cargo in the “Chizhovsky” road for taking anti-epidemic measures.

## **VIII. Special means of communication in the Port.**

138. Navigating vessels and vessels in the roads and at berths of the sea port are to be on constant radio watch on the VHF channels 14 and 16.

139. Data on additional means of communication for information exchange including telephone numbers is to be brought to the attention of seafarers by the Harbour master.

140. Data on VHF channels used in the sea port is stated in the Appendix No.4 of the present Obligatory Regulations.

141. Usage of VHF channels indicated in the present Obligatory Regulations is not allowed for communication between coastal correspondents.

## **IX. Data on the A1 and the A2 sea areas of Global Maritime Distress and Safety System.**

142. The harbour is under coverage of the A1 and the A2 areas of Global Maritime Distress and Safety System, which are informatively connected with the Maritime Rescue Coordination Sub-center of the sea port.

143. Communication with vessels in the A1 GMDSS sea area is provided by operation of:

Shore based station 1 (SBS-1) which range is limited by the radius of 25,6 nautical miles from the SBS-1 in the point with the following coordinates: Latitude 64°32,00' N, Longitude 040°32,00' E;

Shore based station 2 (SBS-2) which range is limited by the radius of 24,5 nautical miles from the SBS-2 in the point with the following coordinates: Latitude 64°51,00' N, Longitude 040°17,00' E.

144. The A2 GMDSS sea area is limited by the radius of 160 nautical miles towards the White sea throat and by the radius of 190 nautical miles towards the “Kandalakshsky” bay from the shore based station in the point with the following coordinates: Latitude 64°21,00' N, Longitude 040°37,00' E.

## **X. Data on the sea port technical facilities regarding taking ships in and on the sea port depths.**

145. Data on the sea port technical facilities regarding taking ships in is indicated in the Appendix No. 2 of the present Obligatory regulations.

146. The sea port is able to take in vessels with the following maximum dimension:

For vessels proceeding along the main ship's canal from the "Mudyugsky No. 1" light buoy:

up to the "Ekonomiya" handling area – of 9,2 meters in draught and 190 meters in length;

up to the berths No.15, 17 of Arkhangelsk terminal "RN – Arkhangelsknefteproduct" – of 9,2 meters in draught and of 180 meters in length;

up to the berths No. 160, 161 the "Saw mill No.3" – of 7,5 meters in draught and of 160 meters in length;

up to the berths of the "Bakaritsa" handling area in the periods when the ice-breaker assistance is not used – of 7,5 meters in draught and of 135 meters in length; and in the periods of the ice-breaker assistance when the ice canal is set – of 7,5 meters in draught and of 165 meters in length;

up to the marine berths No.149, 150 of the Integrated marine and river terminals – of 5,6 meters in draught and of 165 meters in length;

For vessels proceeding along the "Nikolsky" arm canals:

from the City road up to the berths No.93,94,95 of the "Tsiglomensky sawmill" (hereinafter – TSM) – of 5,5 meters in draught (on high quadrature water) and of 110 meters in length;

from the TSM berths up to the "Laysky" dock – of 3,5 meters in draught (on high quadrature water) and of 100 meters in length;

up to the berths No.169,170 the "Saw mill No.2" – of 6 meters in draught and of 100 meters in length;

up to the berths No. 171,172,173 of the "Zharovikha" handling area – of 5,2 meters in draught and of 120 meters in length;

up to the berths No. 174,175,176 JSC "Arkhangelsk pulp and paper mill"- of 3,5 meters in draught and of 130 meters in length.

147. The width of ice canal in places where ice-crossings are installed allows passage of vessels of less than 22 meters in width, except for in place of the "Ekonomiya" handling area – "Saw mill No.29" pedestrians crossing installation, where size of the canal allows passage of vessels of less than 30 meters in width.

148. Data on practical depths within the harbour and at or near berths of the sea port and data on draughts allowed is to be brought to the attention of seafarers by publishing on the [www.mapa.ru](http://www.mapa.ru) web site every year and if changed.

## **XI. Information on dangerous cargoes handling operations**

149. It is allowed in the sea port to handle dangerous cargoes of all IMO classes.

150. Cargo operations with oil and oil products to be effected on the oil handling terminals berths No. 15, 17, 130 and 132.

## **XII. Information on navigation in ice within the sea port rules**

151. Ice-breaking assistance period within the sea port is declared opened when ice is set and is closed after the end of ice-drifting in the mouth of the Northern Dvina river.

152. Ice-breaking assistance period within the harbour in the White sea is declared opened and closed by the Harbour master.

153. For organizing ice-breaking assistance in the sea port the Ice-breaking operations Headquarters is formed.

154. Information on vessel's approaching suppositional line connecting the Mys Svyatoy Nos and the Mys Kanin Nos is to be transferred 72 hours before and confirmed 24 hours before the estimated time

of approaching the point of ice-breaking convoy formation (hereinafter – PICF) pursuant to the clause 27 of the present Obligatory regulations.

The PICF is to be appointed by the Harbour master and ice-breaker master, who forms ice-breaking convoy.

The timetable and the order of priority for vessels proceeding through ice and quantity of vessels simultaneously navigating are to be scheduled by the Harbour master by 11.00 am of each day and to be published on the [www.mapa.ru](http://www.mapa.ru) website. If ice conditions are changed the timetable above is to be specified by 20.00 pm of current day and to be published on the [www.mapa.ru](http://www.mapa.ru) website.

155. Depending on ice conditions within the harbour forecast the Harbour master establishes restrictions on ice navigating in accordance with the Appendix No. 11 of present Obligatory regulations. Information on ice navigation restrictions and on the PICF location is to be published on the [www.mapa.ru](http://www.mapa.ru) website not later than 14 days before the estimated date of their introduction.

156. During young ice appearance vessels without ice class are allowed to proceed to places of long-term laying.

157. Vessels proceeding to the port are to approach the PICF following ice-breaker master orders and the Ice-breaking operations Headquarters recommendations. Vessels which are unable to navigate in PICF independently at the request of ship owner (shipmaster) are to be provided by ice-breaker assistance. Inbound and outbound vessels during ice-breaker assistance period shall be able to go full speed (ahead and astern).

158. Ice-breaker assistance is to be fulfilled by lane and port ice-breakers within ice-breaker assistance convoy from the PICF up to the place of first laying in the port and from the place of last laying in the port up to ice edge in the White sea. In case of inability to proceed in ice-breaker assistance convoy vessel can request individual ice-breaker assistance which is to be executed if there are spare ice-breakers free from assistance of such convoys.

159. Ice-breaker assistance convoy formation to enter/leave the sea port is to be executed by the Harbour master in accordance with the clause 154 of the present Obligatory regulations based on the following:

- time of vessel approaching the PICF;
- time of application for entering/leaving the sea port remittance;
- vessels order of priority, established by the Common regulations;
- restrictions for vessels on navigation in ice.

When vessel approaches the PICF she shall maintain radio communication with the ice-breaker and act pursuant to its instructions. If necessary the Ice-breaking operations headquarters renders assistance in providing radio communication with ice-breaker.

160. Taking into account actual ice conditions within the harbour and vessels' technical particulars ships can proceed independently pursuant to ice-breaker master and the Ice-breaking operations headquarters recommendations.

Vessels navigating independently are to inform the Ice-breaking operations headquarters about their passage every four hours and to report data on ice conditions along the course.

161. By order of ice-breaker effecting assistance vessels in ice-breaking convoy are to switch on VHF channels, indicated by the ice-breaker.

162. Only ice-breakers are allowed to break ice around vessels.

163. Fuel, food and fresh water supplies onboard are to provide autonomy of vessel for not less than 14 days from the moment of approaching the PICF for entering the sea port. If vessel is being in ice-breaking assistance area for the period of more than 14 days from the moment of approaching the PICF, the Harbour master undertakes urgent measures to assist the vessel to enter the port.

164. Vessels at berths or in roads of the sea port which are not protected from ice-drifting shall be harboured in protected places of refuge or taken out to the sea not less than 1 day before thick ice drifts to the harbour.

165. Shipmasters are to determine place of refuge protected from ice-drifting beforehand according to the Harbour master authorization.

166. Vessels are to pass ice-crossings in compliance with the clause 27 of the present Obligatory

regulations.

167. Vessels proceeding along ice canal and approaching ice-crossings are to sound one prolonged blast (signal) on the distance of not less than 0,5 nautical mile to the ice-crossing.

168. If at the moment of approaching the ice-crossing shipmaster is not informed that the canal is free and the ice-crossing is removed, such vessel to stop at the distance of not less than 150 meters up to the crossing. Such vessel is allowed to proceed only if informed that the crossing is removed and permission for the following passage is given.

169. Permission to pass ice-crossing is to be given by the following:

at day time – by waving flag towards vessel passage direction, effected by ice-crossing post (watch) employees;

at night time – by switching off the red light on signal mast and by exhibiting the green light on it.

170. Vessels awaiting to pass ice-crossing are to burn into the right edge of ice canal at the distance of not less than 300 meters up to the ice-crossing and are to stop for passing vessels navigating head on (towards). Such vessels are allowed to proceed after the permission of the Harbour master is given.

171. After passing ice-crossing a vessel or the last vessel from convoy is to pan ice from ice canal to the area of the ice-crossing bridges (pontoons) installation using her propellers.

### **XIII. Data on transmission of information by masters of vessels in the harbour in the event of any threats of illegal acts or trespasses.**

172. In the event of any threats on illegal acts or trespasses shipmaster or person responsible for vessel's security is to inform immediately the employee of port facility responsible for security and also the Harbour master.

173. Information on the levels of port facilities security and on the levels of vessels security and on any changes in such levels is to be submitted to the Harbour master.

174 . Notification on any threats of illegal acts or trespasses in the sea port and on any changes in the level of vessel's security as well as confirmation that such reports are received to be effected on VHF channels without any delays since the threats above occurred.

175. Masters of vessels within the sea port are to inform without any delays the Harbour master and the employee of the port facility responsible for security via VHF channels and by using additional means of communication on the following:

on any accidents, incidents if any suspected items or explosives are detected; on any signs of illegal acts or trespasses attempts and commitments; on any trespasses on vessels; on any information about terrorist acts preparation and also on violation of any rules imposed or on suspicious persons in the sea port.

The information above is to be reported by the Harbour master to the persons concerned.

### **XIV. Data on navigational and hydro meteorological information transmission to masters of ships within the port**

176. The sea port forecast is to be transferred on the VHF channel 14 by the Harbour master daily at 14.00 pm of local time.

177. Transmittance of highly important notifications and of storm warnings is to be effected in advance by announcement on the VHF channels 14 and 16.

Vessels are to confirm remittance of storm warnings and of important notifications.

**Appendix No. 1**  
**of the Obligatory regulations (clause 15)**

**Data on the fairways of the sea port**

Fairway name and direction	The coordinates of the fairway beginning	The fairway length, nautical miles	Breadth, meters	Depth, meters	Vessel draught, meters
1	2	3	4	5	6
<b>Fairways of the main fairway</b>					
The fairway of the Mudyug towers 320,2°-140,2°	Latitude 64°56,77' N, Longitude 040°05,60' E	5,12	160	10,3	9,2
The "Vasilyevsky" 332,5°-152,5°	Latitude 64°52,83' N Longitude 040°13,28' E	1,85	120	10,3	9,2
The "Ustyanovsky" 317,3°-137,3°	Latitude 64°51,23' N Longitude 040°15,23' E	4,3	120	10,3	9,2
The "Bakansky" 327,4°-147,4°	Latitude 64°48,03' N Longitude 040°22,20' E	1,5	120	10,3	9,2
The "Lapominsky" 289,9°-109,9°	Latitude 64°46,83' N Longitude 040°23,97' E	1,9	120	10,3	9,2
The "Perekhodny" 309,5°-129,5°	Latitude 64°46,20' N Longitude 040°28,05' E	0,57	120	10,3	9,2
The "Chizhovsky" 342,1°-162,1°	Latitude 64°45,80' N Longitude 040°29,20' E	2,3	120	10,3	9,2
The "Ekonomsky" 355,6°-175,6°	Latitude 64°43,57' N Longitude 040°30,90' E	0,9	120	10,3	9,2
The "Reushinsky" 224,7° - 44,7° (the "Obratny Reushinsky" line is also used for navigating along the "Reushinsky fairway")	Latitude 64°42,90' N Longitude 040°31,00' E	1,2	80	8,2	7,8
The "Nizhnekriyavsky" 22,4°-202,4°	Latitude 64°42,00' N Longitude 040°29,00' E	0,4	80	8,2	7,8
The "Priluksky" 170°-350°	Latitude 64°41,62' N Longitude 040°28,67' E	0,37	80	8,2	7,8
The "Osinyov" 128,2°-308,2°	Latitude 64°41,27' N Longitude 040°28,78' E	0,3	80	8,2	7,8
The "Srednekriyavsky" 157,9° - 337,9°	Latitude 64°41,07' N Longitude 040°29,37' E	0,3	80	8,2	7,8
The "Verkhnekriyavsky" 178,6°-358,6° (in the end	Latitude 64°40,82' N Longitude 040°29,60' E	0,6	80	8,2	7,8

of the fairway (Latitude 64°40,27'N, Longitude 040°29,65' E) slight to the “Krivyaksky” fairway )					
The “Krivyaksky” 126,7°-306,7°	Latitude 64°40,13'N Longitude 040°29,83'E	0,7	80	8,2	7,8
The “Nizhnepovrakulsky” 146,7°- 326,7° (in the end of the fairway (Latitude 64°39,45'N, Longitude 040°31,60' E) slight to the “Povrakulsky” fairway )	Latitude 64°39,68'N Longitude 040°31,20'E	0,25	80	8,2	7,8
The “Povrakulsky” 206,6°-26,6°	Latitude 64°39,23'N Longitude 040°31,60'E	0,65	80	8,2	7,5
The “Nizhnekuryaretsky” 182°-2° (in the end of the fairway (Latitude 64°37,80'N, Longitude 040°30,80'E) turn to the “Kuryaretsky” fairway)	Latitude 64°38,63'N Longitude 040°30,88'E	0,8	80	8,2	7,5
The “Kuryaretsky” 247° - 67°	Latitude 64°37,70' N Longitude 040°30,60'E	0,7	80	8,2	7,5
The fairway of the area without lines 185°-5° (passage from the “Kuryaretsky” fairway to the “Brevennikovsky” fairway at a distance of approximately 0,3 nautical mile is effected along the river road )	Latitude 64°37,43'N Longitude 040°29,08'E	0,3	80	8,2	7,5
The “Brevennikovsky” 143,5°-323,5°	Latitude 64°37,13'N Longitude 040°29,00'E	0,4	80	8,2	7,5
The “Amosovsky” 184,5°-4,5°	Latitude 64°36,82'N Longitude 040°29,60'E	1	80	8,2	7,5
The “Udelninsky” 163,7°-343,7°	Latitude 64°35,75' N Longitude 040°29,40' E	0,9	80	8,2	7,5
The fairway of the area without lines along the “Georgy Sedov” Embankment 356°-176° (the passage from the “Udelninsky” fairway to the “Solombalsky” fairway at a distance of approximately 1,1	Latitude 64°35,07'N Longitude 040°29,87'E	1,1	80	8,2	7,5



nautical miles is effected along the river road, herewith it's necessary to adhere the "Solombalsky" Islands guided by navigational equipment)					
The "Solombalsky" 196°-16°	Latitude 64°33,90'N Longitude 040°30,13'E'	1,2	80	8,2	7,5
The "Khecheminsky" 343,6°-163,6°	Latitude 64°32,93' N Longitude 040°29,47'E	1,37	80	8,2	7,5
The fairway of the area without lines across the deviation ground and the City road 105,7°-285,7° (passage from the "Khecheminsky" fairway to the "Okulovsky" at a distance of approximately 2 miles is to be effected along the river road under the railway bridge between the abutments No.3 and No.4, using the navigational equipment of the railway bridge)	Latitude 64°31,72'N Longitude 040°30,33'E	2	80	8,2	7,5
The "Okulovsky" 155°-335° (the fairway leads across the highway bridge lifting span between the abutments No.3L and No.4L. For navigation along the "Okulovsky" fairway the "Okulovsky Obratny" line is also used	Latitude 64°31,12' N Longitude 040°35,13'E	2,12	80	8,2	7,5
The "Bakaritsky perekhodny" 85,8°-265,8°	Latitude 64°29,27'N Longitude 040°37,15'E	0,35	80	8,2	7,5
The "Nizhneturdeevsky" 115,2°-295,2°	Latitude 64°29,28'N Longitude 040°37,92'E	1,7	80	8,2	7,5
The "Turdeevsky" 102,4°-282,4°	Latitude 64°28,52' N Longitude 040°41,72'E	0,9	80	8,8	7,5
The "Uemsky" 74,2° - 254,2°	Latitude 64°28,33'N Longitude 040°43,70'E	1	80	6	3,6
The "Belaya Gora" 137,8°-317,8° (the fairway leads up to the southern border of the sea port)	Latitude 64°28,60'N Longitude 040°45,97'E	1,6	80	6	3,6

<b>The additional fairways</b>					
<b>The Kusnechikha river</b>					
The “Kuznechevsky vkhodnoy” 132,6°-312,6°	Latitude 64°42,63' N Longitude 040°31,05' E	0,7	120	10,3	9,2
The “Kuznechevsky perekhodnoy” 91,5°-271,5°	Latitude 64°42,13' N Longitude 040°32,23' E	0,31	120	10,3	9,2
The “Bogoslovsky” 50,8°-230,8°	Latitude 64°42,08' N Longitude 040°32,92'E	0,43	100	10,3	9,2
The “Srednebogoslovsky” 76,1°-256,1°	Latitude 64°42,42' N Longitude 040°33,88' E	0,45	100	10,3	9,2
The “Verkhnebogoslovsky” 118,7°-298,7°	Latitude 64°42,53' N Longitude 040°34,75' E	0,7	100	10,3	9,2
The “Nezhnelodmostrovsky” 154,2°-334,2°	Latitude 64°42,22' N Longitude 040°36,17' E	0,77	100	10,3	9,2
The “Lodmostrovsky” 125,5°-305,5° (The “Lodmostrovsky obratny” line is also used for passage along the “Lodmostrovsky” fairway)	Latitude 64 °41,52' N Longitude 040°36,93' E	1,6	100	10,3	9,2
The “Lodemsky” 167,3°-347,3°	Latitude 64°40,62' N Longitude 040°39,92' E	0,38	100	10,3	9,2
The “Pekostrovsky” 205,7°- 25,7°	Latitude 64°40,22' N Longitude 040°40,15' E	0,84	100	10,3	9,2
The “Korelsky” 178,9°-358,9° (the fairway leads to the “Rosneft” berths)	Latitude 64°39,43' N Longitude 040°39,30' E	0,8	100	10,3	9,2
<b>The “Murmansky” arm</b>					
The “Korabelny” 281°-101° (the fairway leads from the main fairway to the “Murmansky” arm )	Latitude 64°36,43' N Longitude 040°29,55' E	0,54	80	8,2	-
The fairway of the aria without lines 316°-136° (the fairway leads from the “Korabelny” line up to the “Vygonny” line ingoing )	Latitude 64°36,55' N Longitude 040°28,33' E	1,16	80	8,2	-
The ”Vygonny”271,3°- 91,3°	Latitude 64°37,42' N Longitude 040°26,50' E	1,69	80	8,2	-
The “Zalakhotsky” 295°-115° (The “Zalakhotsky obratny” line is also used for passage along the “Zalakhotsky” fairway)	Latitude 64°37,47' N Longitude 040°22,57' E	2,47	80	8,2	-
The “Tinovatik”321,8°-141,8°	Latitude 64°38,52' N Longitude 040°17,35' E	0,76	80	8,2	-
The “Onishyevsky” 353,5°- 173,5°	Latitude 64°39,01' N Longitude 040°16,42' E	0,42	80	8,2	-

The “Knevaty” 12,1°-192,1°	Latitude 64°39,53' N Longitude 040° 16,20' E	1,58	80	8,2	-
The “Shchyuchy” 313,6°-133,6° (the “Nikolsky” line is also used for passage along the “Shchyuchy” fairway)	Latitude 64°41,07' N Longitude 040° 16,98' E	3,89	80	8,2	-
The fairway of area without lines 296°-116° (the fairway leads from the “Shchyuchy” line up to the “Solovetsky” line)	Latitude 64°43,75' N Longitude 040°10,25' E	0,4	80	8,2	-
The “Solokotsky” 287,8°-107,8° (The “Obratny Solokotsky” line is also used for passage along the “Solokotsky” fairway)	Latitude 64°45,13' N Longitude 040°00,58' E	4,02	80	8,2	-
The fairway of area without lines 131°-311° (the fairway leads from the Solokotsky” fairway up to the “Kumbysh vkhodnoy” fairway)	Latitude 64°45,90' N Longitude 039°58,55' E	1,16	80	8,2	-
The “Kumbysh vkhodnoy” 348,3° -168,3°	Latitude 64°48,40' N Longitude 039°57,32' E	2,56	80	8,2	-
<b>The “Nikolsky” arm</b>					
The “Verkhnekegostrovsky” 278,1°-98,1° (the fairway leads from the “City” road up to the “Kegostrovsky” line)	Latitude 64°31,60' N Longitude 040°30,40' E	1,5	60	7	5,5
The fairway of area without lines 257° - 77° (the fairway leads from the “Verkhnekegostrovsky” fairway along the “Kego” island at a distance of 0,4 nautical miles up to the “Kegostrovsky” fairway )	Latitude 64°31,83' N Longitude 040°26,52' E	0,4	60	7	5,5
The “Kegostrovsky” 263,8°-83,8°	Latitude 64°31,75' N Longitude 040°25,52' E	1,32	60	7	5,5
The “Zelenetsky” 318,5°-138,5° (the fairway leads from the “Kegostrovsky” fairway up to the “Glinniksky” fairway)	Latitude 64°31,67' N Longitude 040°23,90' E	2,18	60	7	5,5
The “Tsyglomensky” 287,7°-107,7° (the fairway leads from the “Zelenetsky” fairway to the “Tsyglomensky saw mill” berths)	Latitude 64°32,15' N Longitude 040°22,88' E	0,4	60	7	5,5
the “Glinniksky” 281°- 101°	Latitude 64°33,30' N	1,07	60	5,5	3,5

	Longitude 040°20,50' E				
The “Laysky” 246,8° - 66,8°	Latitude 64°33,48' N Longitude 040°18,05' E	1,5	60	5,5	3,5
The “Laysky vkhodnoy” 122,3°-302,3° (the fairway leads from the “Laysky” fairway to the “Laysky dock” dockyard berths in the mouth of the river)	Latitude 64°32,90' N Longitude 040°14,87' E	0,2	60	5,5	3,5
<b>The “Bakaritskaya” channel</b>					
The fairway of the “Povorotny” bay 223,7°-43,7° (the fairway leads from the “Okulovsky” to the “Bakaritsky” fairway)	Latitude 64°29,27' N Longitude 040°37,15' E	0,26	80	8,2	7,5
The “Bakaritsky” 184,1°-4,1° (the fairway leads from the fairway of the “Povorotny” bay to berths)	Latitude 64°29,07' N Longitude 040°36,77' E	0,57	80	8,2	7,5
<b>The fairways for passage to the berths of the “Zharovikha” handling area, the “Saw mill No. 2”, the Fish processing plant, the “Arkhangelsk pulp and paper mill”</b>					
The “Shirshinsky perekhodnoy” 53,5° - 233,5° (the fairway leads from the “Nizhneturdeevsky” fairway up to the “Shirshinsky” fairway)	Latitude 64°28,65' N Longitude 040°41,08' E	0,22	80	7,5	6,3
The “Shirshinsky” 332,5°-152,5°	Latitude 64°28,75' N Longitude 040°41,43' E	1,45	80	7,5	6,3
The “Krasnoflotsky” 104,2°-284,2° (The “Obratny Krasnoflotsky” line is also used for passage along the “Krasnoflotsky” fairway. The fairway leads from the “Shirshinsky” fairway to the “Saw mill No. 2” berth.)	Latitude 64°29,57' N Longitude 040°40,43' E	0,48	60	7	6,3
The “Tralbazovsky podkhodnoy” 97,8°-277,8° (Leads from the “Shirshinsky” fairway to the Fish processing plant berths)	Latitude 64°29,80' N Longitude 040°40,15' E	0,4	60	7	4,3
The “Zharovikha podkhodnoy” 36,8° -216,8° (Leads from the “Turdeevsky” fairway to the “Zharofikha” handling area berths)	Latitude 64°28,40' N Longitude 040°43,05' E	0,47	60	4	3,6

The "Arkbumovsky" 332,9°-152,6° (leads from the "Belayay gora" fairway to the berths of "Arkhangelsk pulp and paper mill")	Latitude 64°27,43' N Longitude 040°48,43' E	0,63	80	6	2,2
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**Appendix No. 2**  
**of the Obligatory regulations (clauses 16,145)**

**Data on the technical facilities of the sea port regarding taking vessels in**

NN	name of berth	location of berth (coordinates)	Technical features of berth	
			length of berth (meters)	depth at berth (meters)
1	2	3	4	5
1	The berth No. 1	Latitude 64°42,53' N Longitude 040°31,00' E	150	9,52
2	The berth No. 2	Latitude 64°42,46' Longitude 040°31,13' E	180	9,63
3	The berth No. 3	Latitude 64°42,40' N Longitude 040°31,29' E	195	9,52
4	The berth No. 4	Latitude 64°42,33'N Longitude 040°31,48'E	170,8	9,52
5	The berth No. 5	Latitude 64°42,26'N Longitude 040°31,63'	154	9,52
6	The berth No. 6	Latitude 64°42,18'N Longitude 040°31,66'E	158	9,52
7	The berth No. 7	Latitude 64°42,10' N Longitude 040°31,69' E Latitude 64°42,01' N Longitude 040°31,72'E	154,6	9,52
8	The berth No. 8	Latitude 64°42,09'N Longitude 040°32,14'E; Latitude 64°42,10' N Longitude 040°32,15'E; Latitude 64°42,09' N Longitude 040°32,17'E; Latitude 64°42,06' N Longitude 040°32,15'E	94,8	3
9	The berth No. 13	Latitude 64°42,52' N Longitude 040°35,07E	125	7,5
10	The berth No. 14	Latitude 64°42,48' N Longitude 040°35,20'E; Latitude 64°42,45'N Longitude 040°35,34'E	125	7,5
11	The berth No. 15	Latitude 64°38,74' N Longitude 040°39,30'E	150	9,6
12	The berth No. 16	Latitude 64°3 8,66'N Longitude 040°3 9,24'E	152,9	9
13	The berth No. 17	Latitude 64°38,59N Longitude 040°39,17'E; Latitude 64°38,50'N	185,8	10,4

		Longitude 040°39,04'E		
14	The berth No. 19	Latitude 64°41,20'N Longitude 040°29,00'E	126,9	10,5
15	The berth No. 20	Latitude 64°41,17'N' Longitude 040°29,15'E'; Latitude 64°41,13'N Longitude 040°29,28'E	126,5	10,5
16	The berth No. 21	Latitude 64°39,78' N Longitude 040°31,00'E	253,35	10
17	The berth No. 22	Latitude 64°39,73'N Longitude 040°31,11'E; Latitude 64°39,68'N Longitude 040°31,22'E	253,35	10
18	The berth No. 26	Latitude 64°39,08'N Longitude 040°31,16'E; Latitude 64°39,01'N Longitude 040°31,08'E	148,4	9,4
19	The berth No. 32	Latitude 64°37,51'N Longitude 040°29,52'E; Latitude 64°37,51'N Longitude 040°29,50'E	54,2	3,42
20	The berth No. 33	Latitude 64°37,42'N Longitude 040°28,82'E; Latitude 64°37,39'N Longitude 040°28,78'E	70	-
21	The berth No. 34	Latitude 64°37,02'N Longitude 040°29,31'E; Latitude 64°36,96'N Longitude 040°29,40'E	128	7
22	The berth No. 37	Latitude 64°37,42'N Longitude 040°26,63'E	190	8
23	The berth No. 38	Latitude 64°37,34'N Longitude 040°26,78'E; Latitude 64°37,26'N Longitude 040°26,93'E	190	8
24	The berth No. 41	Latitude 64° 36,09'N Longitude 040°29,90'E	130	8,5
25	The berth No. 42	Latitude 64°36,02'N Longitude 040°29,96'E	130	8,5
26	The berth No. 43	Latitude 64°35,95'N Longitude 040°30,01'E	130	8,5
27	The berth No. 44	Latitude 64°35,89'N Longitude 040°30,06'E'	130	8,5
28	The berth No. 45	Latitude 64°35,82'N Longitude 040°30,11' E	130	8,5
29	The berth No. 46	Latitude 64°35,76'N Longitude 040°30,12'E	142	8
30	The berth No. 47	Latitude 64°35,69'N Longitude 040°30,12'E	155	10,5
31	The berth No. 48	Latitude 64°35,60'N Longitude 040°30,13'E;	155	10,5

		Latitude 64°35,52N' Longitude 040°30,14'E		
32	The berth No. 50	Latitude 64°35,02' Longitude 040°28,86'; Latitude 64°34,94' Longitude 040°28,77'	160	8
33	The berth No. 51	Latitude 64°35,33'N Longitude 040°30,13'E	60	5,5
34	The berth No. 52	Latitude 64°35,29'N Longitude 040°30,11'E; Latitude 64°35,24'N Longitude 040°30,08'E	110	5,5
35	The berth N 52.1	Latitude 64°35,13'N Longitude 040°30,04'E; Latitude 64°35,12'N Longitude 040°30,03'E	25	
36	The berth No. 53	Latitude 64°35,02'N Longitude 040°30,01'E; Latitude 64°34,97'N Longitude 040°29,99'E	110,9	8,25
37	The berth No. 57	Latitude 64°34,54'N Longitude 040°30,05'E	85	6,5
38	The berth No. 58	Latitude 64°34,49' N Longitude 040°30,04'E	50	6,5
39	The berth No. 59	Latitude 64°34,46'N Longitude 040°30,05'E; Latitude 64°34,43'N Longitude 040°30,06'E	60	6,5
40	The berth No. 60	Latitude 64°34,37 Longitude 040°30,09'	85	6,5
41	The berth No. 61	Latitude 64°34,33N' Longitude 040°30,13E'; Latitude 64°34,29'N Longitude 040°30,19'E	85	6,5
42	The berth No. 62	Latitude 64°34,29'N Longitude 040°30,24'E; Latitude 64°34,27'N Longitude 040°30,32'E	85	6,5
43	The berth No. 63	Latitude 64°34,26'N Longitude 040°30,22'E	42	3,42
44	The berth No. 64	Latitude 64°34,24'N Longitude 040°30,18'E	120	6,42
45	The berth No. 65	Latitude 64°34,18'N Longitude 040°30,23'E	151	6,42
46	The berth No. 66	Latitude 64°34,11'N Longitude 040°30,29'E	100	7
47	The berth No. 67	Latitude 64°34,05' N Longitude 040°30,33'E	18	7
48	The berth No. 68	Latitude 64°34,06'N Longitude 040°30,35'E	100	6
49	The berth No. 69	Latitude 64°34,11'N	139	4,42



		Longitude 040°30,31'E'		
50	The berth No. 70	Latitude 64°34,14'N Longitude 040°30,46'E; Latitude 64°34,18'N Longitude 040°30,61'E	138,5	4,42
51	The berth No.71	Latitude 64°34,18'N Longitude 040°30,64'E'; Latitude 64°34,15'N' Longitude 040°30,71'E	75	4
52	The berth No. 72	Latitude 64°34,14'N Longitude 040°30,71'E	100	4
53	The berth No. 72.1	Latitude 64°34,10'N Longitude 040°30,64'E'	93	-
54	The berth No. 72.2	Latitude 64°34,06'N Longitude 040°30,59'E'	100	-
55	The berth No. 72.3	Latitude 64°34,03' N Longitude 040°30,70'E	78	3
56	The berth No. 72.4	Latitude 64°34,01'N Longitude 040°30,78'E	72	10
57	The berth No. 72.5	Latitude 64°34,00'N Longitude 040°30,87'E	70	5
58	The berth No. 72.6	Latitude 64°33,97'N Longitude 040°30,97'E	108	2,92
59	The berth No. 72.7	Latitude 64°33,92'N Longitude 040°30,88'E	56,8	2,92
60	The berth No. 73	Latitude 64°33,90'c Longitude 040°30,84'	111,2	9,9
61	The berth No. 74	Latitude 64°33,92'N Longitude 040°30,72'E; Latitude 64°33,96'N Longitude 040°30,60'E	111,5	9,9
62	The berth No. 75	Latitude 64°34,01'N Longitude 040°30,37'E	73,3	5
63	The berth No. 76	Latitude 64°34,02'N Longitude 040°30,31'E	79,31	5
64	The berth No. 77	Latitude 64°33,97' N Longitude 040°30,29'E	160	7,8
65	The berth No. 78	Latitude 64°33,89'N Longitude 040°30,26'E; Latitude 64°33,81'N Longitude 040°30,23'E	150	7,5
66	The berth No. 79	Latitude 64°33,68'N Longitude 040°3 0,30'E; Latitude 64°33,65'N Longitude 040°30,32'E	64,3	6,5
67	The berth No. 80	Latitude 64°33,65'N Longitude 040°30,75'E; Latitude 64°33,67'N Longitude 040°30,80'E	50	2,5
68	The berth No. 81	Latitude 64°33,99'N Longitude 040°31,30'E;	30	1,42

		Latitude 64°33,98'N Longitude 040°31,32'E		
69	The berth No. 82	Latitude 64°35,13'N Longitude 040°34,67'E; Latitude 64°35,15'N Longitude 040°34,84'E	142	-
70	The berth No. 83	Latitude 64°35,09'N Longitude 040°35,45'E	62,5	-
71	The berth No. 84	Latitude 64°35,06'N Longitude 040°35,40'E; Latitude 64°35,04'N Longitude 040°35,35'E	62,5	-
72	The berth No. 85	Latitude 64°33,57'N Longitude 040°31,12'E; Latitude 64°33,54'N Longitude 040°31,10'E	47	3
73	The berth No. 86	Latitude 64°33,07'N Longitude 040°30,71'E; Latitude 64°32,98'N Longitude 040°30,67'E	165	-
74	The berth No. 91	Latitude 64°33,22'N Longitude 040° 19,56'E; Latitude 64°33,19'N Longitude 040° 19,66'E	90	-
75	The berth No. 93	Latitude 64°32,39' N Longitude 040°21,53'E	119,1	8,25
76	The berth No. 94	Latitude 64°32,34'N Longitude 040°21,62' E	120	8,25
77	The berth No. 95	Latitude 64°32,29'N Longitude 040°21,70'E; Latitude 64°32,25' N Longitude 040°21,72' E	100	8,25
78	The berth No. 96	Latitude 64°31,83'N Longitude 040°24,29'E	110	8,2
79	The berth N 97	Latitude 64°31,80'N Longitude 040°24,42'E'; Latitude 64°31,80'N Longitude 040°24,55'E	110	8,2
80	The berth No. 98	Latitude 64°32,21'N Longitude 040°30,57'E	90	2,4
81	The berth No. 99	Latitude 64°32,17'N Longitude 040°30,64'E	90	2,4
82	The berth No. 100	Latitude 64°32,13'N Longitude 040°30,70'E	60	2,4
83	The berth No.101	Latitude 64°32,11'N Longitude 040°30,65'E; Latitude 64°32,16'N Longitude 040°30,58'E	92	5,5
84	The berth No. 102	Latitude 64°32,15'N Longitude 040°30,56'E	94	6,7
85	The berth No. 103	Latitude 64°32,10'N	84	6,7

		Longitude 040°30,63'E		
86	The berth No. 104	Latitude 64°32,07'N Longitude 040°30,70'E	72	5,5
87	The berth No. 105	Latitude 64°32,09'N Longitude 040°30,77'E	117	5,5
88	The berth No. 106	Latitude 64°32,06'N Longitude 040°30,88'E	83	5,5
89	The berth No. 107	Latitude 64°32,02' N Longitude 040°30,82'E	32	5,5
90	The berth No.108	Latitude 64°32,01'N Longitude 040°30,86' E	83	5,5
91	The berth No. 109	Latitude 64°32,04'N Longitude 040°30,92' E	117	4,9
92	The berth No. 110	Latitude 64°32,01'N Longitude 040°31,03' E	55,5	4,9
93	The berth No. 111	Latitude 64°31,98'N Longitude 040°30,99'E; Latitude 64°32,00' N Longitude 040°30,94' E	56,8	5,1
94	The berth No. 112	Latitude 64°31,97'N Longitude 040°30,92'E	79,6	5
95	The berth No. 113	Latitude 64°31,96'N Longitude 040°31,00'E; Latitude 64°31,92'N Longitude 040°31,13' E	132,65	7
96	The berth No. 114	Latitude 64°31,41'N Longitude 40°31,48'E; Latitude 64°31,38'N Longitude 040°31,57'E	100	6
97	The berth No. 116	Latitude 64°31,36'N Longitude 040°31,87'E; Latitude 64°31,32'N Longitude 040°32,00'E	120	3
98	The berth No. 117	Latitude 64°31,43'N Longitude 040°31,13'E; Latitude 64°31,42'N Longitude 040°31,23'E	76	1,53
99	The berth No. 118	Latitude 64°31,31'N Longitude 040°32,29'E	180	7,5
100	The berth No. 119	Latitude 64°31,27'N Longitude 040°32,50' E	180	7,8
101	The berth No. 120	Latitude 64°31,24' N Longitude 040°32,71' E	198	-
102	The berth No. 121	Latitude 64°31,20' N Longitude 040°32,94' E	178	-
103	The berth No. 122	Latitude 64°31,17'N Longitude 040°33,15'E	83	-
104	The berth No. 123	Latitude 64°31,15'N Longitude 040°33,25' E	83	-
105	The berth No. 124	Latitude 64°31,14' N Longitude 040°33,34' E	83	-

106	The berth No. 125	Latitude 64°31,12' N Longitude 040°33,44'E; Latitude 64°31,11'N Longitude 040°33,54' E	83	-
107	The berth No. 126	Latitude 64°30,98'N Longitude 040°34,11'E; Latitude 64°30,98'N Longitude 040°34,15'E	39	-
108	The berth No. 127	Latitude 64°30,89'N Longitude 040°34,51'E	152,21	-
109	The berth No. 128	Latitude 64°30,84'N Longitude 040°34,66'E; Latitude 64°30,79'N Longitude 040°34,83'E	168,6	2,98 - 1,98
110	The berth No. 130	Latitude 64°30,65' N Longitude 040°35,24'E; Latitude 64°30,59'N Longitude 040°35,34'E	143	1,9
111	The berth No. 132	Latitude 64°30,19'N Longitude 040°35,77'E; Latitude 64°30,16'N Longitude 040°35,79'E	60	5
112	The berth No. 133	Latitude 64°29,30'N Longitude 040°36,55'E	219	8
113	The berth No. 134	Latitude 64°29,19'N Longitude 040°36,56'E	94	8
114	The berth No. 135	Latitude 64°29,14' N Longitude 040°36,55'E	135,5	8
115	The berth No. 136	Latitude 64°29,06'N Longitude 040°36,54'E	160,9	8
116	The berth No. 137	Latitude 64°28,98'N Longitude 040°36,52' E	93	8
117	The berth No. 138	Latitude 64°28,93' N Longitude 040°36,51' E	113	8
118	The berth No.139	Latitude 64°28,87'N Longitude 040°36,49'E	164,75	6,9
119	The berth No. 140	Latitude 64°28,78' N Longitude 040°36,48' E	217,25	8
120	The berth No. 141	Latitude 64°28,66' N Longitude 040°36,52'E	71,4	8
121	The berth No. 142	Latitude 64°28,63'N Longitude 040°36,54' E	80,3	7,75
122	The berth No.143	Latitude 64°28,59'N Longitude 040°36,59'E	162,9	7,75
123	The berth N 144	Latitude 64°28,51'N Longitude 040°36,68'E	120	7,75
124	The berth N 145	Latitude 64°28,45'N Longitude 040°36,75'E; Latitude 64°28,37'N Longitude 040°36,86'E	181,5	7,75
125	The berth No. 146	Latitude 64°31,81'N	34,5	4,1

		Longitude 040°31,68'E		
126	The berth No. 147	Latitude 64°31,80'N Longitude 040°31,72'E	35	4,1
127	The berth No. 148	Latitude 64°31,79'N Longitude 040°31,76'E; Latitude 64°31,79'N Longitude 040°31,80'E	35	4,1
128	The berth No. 149	Latitude 64°31,72'N Longitude 040°32,16'E	126,6	5,8
129	The berth No. 150	Latitude 64°31,70'N Longitude 040°32,30'E	124,9	5,8
130	The berth No. 151	Latitude 64°31,67'N Longitude 040°32,45'E	64,2	3,2
131	The berth No. 152	Latitude 64°31,66' N Longitude 040°32,52'E	64,2	3,2
132	The berth No. 153	Latitude 64°31,65'N Longitude 040°32,60' E	64,2	3,2
133	The berth No. 154	Latitude 64°31,63'N Longitude 040°32,67' E	67	3,2
134	The berth No. 155	Latitude 64°31,62'N Longitude 040°32,75'E; Latitude 64°31,64' Longitude 040°32,82'	63,9	0-3,2
135	The berth No. 157	Latitude 64°31,41' Longitude 040°35,84'; Latitude 64°31,41'N Longitude 040°35,99'E	120	3,7
136	The berth No. 158	Latitude 64°31,22'N Longitude 040°37,13'E; Latitude 64°31,20'N Longitude 040°37,19'E	56,89	3,5
137	The berth No. 159	Latitude 64°31,21'N Longitude 040°37,24'E; Latitude 64°31,15'N Longitude 040°37,39'E	150	3,5
138	The berth No. 160	Latitude 64°31,13' N Longitude 040°37,45' E	126	8
139	The berth No. 161	Latitude 64°31,08' N Longitude 040°37,56'E; Latitude 64°31,03'N Longitude 040°37,68'E	127,4	8
140	The berth No. 162	Latitude 64°29,98'N Longitude 040°40,75'E; Latitude 64°29,97'N Longitude 040°40,80'E	100	8
141	The berth No. 163	Latitude 64°29,94'N Longitude 040°40,83'E	123,5	7
142	The berth No. 164	Latitude 64°29,88' N Longitude 040°40,89'E	78	7
143	The berth No. 165	Latitude 64°29,84'N Longitude 040°40,93'E;	125	7

		Latitude 64°29,78'N Longitude 040°40,99'E		
144	The berth No. 166	Latitude 64°29,78'N Longitude 040°40,96'E; Latitude 64°29,72'N Longitude 040°41,04'E	117	7
145	The berth No. 167	Latitude 64°29,72'N Longitude 040°41,01' E	125	6
146	The berth No. 168	Latitude 64°29,66'N Longitude 040°41,10'E; Latitude 64°29,61'N Longitude 040°41,18'E	122,4	6
147	The berth No. 169	Latitude 64°29,50'N Longitude 040°41,35' E	ΠΟ	7,5
148	The berth No. 170	Latitude 64°29,45'N Longitude 040°41,43'E; Latitude 64°29,40'N Longitude 040°41,51'E	113,6	8,35
149	The berth No. 171	Latitude 64°28,78'N Longitude 040°43,69'E	120	3,65
150	The berth No. 172	Latitude 64°28,75'N Longitude 040°43,82'E	120	3,65
151	The berth No.173	Latitude 64°28,72'N Longitude 040°43,96'E; Latitude 64°28,70'N Longitude 040°44,09'E	120	3,65
152	The berth No. 174	Latitude 64°26,94'N Longitude 040°48,83'E	205	1,8
153	The berth No. 175	Latitude 64°26,86'N Longitude 040°49,03'E		1,8
154	The berth No. 176	Latitude 64°26,81'N Longitude 040°49,15'E; Latitude 64°26,73'N Longitude 040°49,36'E	225,5	1,8
<b>The "Saw Mill No.23" Ltd ferry</b>				
155	The berth No. 1 (The "Saw mill Ltd N 22")	Latitude 64°38,89'N Longitude 040°31,37'E; Latitude 64°38,88'N Longitude 040°31,38'E	30	-
156	The berth No. 2 (The "Saw mill Ltd N 23")	Latitude 64°39,01'N Longitude 040°31,07'E; Latitude 64°39,00'N Longitude 040°31,06'E	20	-
<b>The JSC "Arkhangelsk Trawl Fleet"</b>				
157	The berth No. 4	Latitude 64°38,24' N Longitude 040°30,91' E	42,8	7,5
158	The berth No. 1	Latitude 64°38,22'N Longitude 040°31,20'E;	57,3	7,5

		Latitude 64°38,22'N Longitude 040°31,27'E		
159	The berth No. 2	Latitude 64°38,22'N Longitude 040°31,07'E	100	7,5
160	The berth No. 3	Latitude 64°38,22' N Longitude 040°30,94' E	100	7,5
161	The berth No. 5	Latitude 64°38,11'N Longitude 040°31,33'E	89,7	4,4
162	The berth No. 6	Latitude 64°38,11'N Longitude 040°31,22'E	89,7	4,4
163	The berth No. 7	Latitude 64°38,12'N Longitude 040°31,10' E	89,7	4,4
164	The berth No. 8	Latitude 64°38,12'N Longitude 040°30,99'E; Latitude 64°38,13'N Longitude 040°30,88' E	89,8	4,4
<b>The "Solombalskaya sudoverf" bucket</b>				
165	The berth No. 1	Latitude 64°35,46N' Longitude 040°30,20'E; Latitude 64°35,44'N Longitude 040°30,26'E	50,3	-
<b>The JSC "Northern Shipping Company"</b>				
166	The berth of the "Boats fleet"	Latitude 64°33,98'N Longitude 040°30,45'E; Latitude 64°33,98'N Longitude 040°30,48'E	25	-
<b>The "Arktickreid" Ltd</b>				
167	The berth "Moseev Island 28"	Latitude 64°33,73'N Longitude 040°30,81'E; Latitude 64°33,76' N Longitude 040° 30,86'E	63	1,92
<b>The FSBI "Sevrybvod"</b>				
168	The berth No. 1	Latitude 64°34,40'N Longitude 040°33,48'E; Latitude 64°34,38'N Longitude 040°33,44'E	90	-
<b>The JSC "Arkhangelsk River Port"</b>				
169	The berth No. 1	Latitude 64°31,91'N Longitude 040°31,19'E	63	-
170	The berth No. 2	Latitude 64°31,93'N Longitude 040°31,25'E	37,1	-
171	The berth No. 3	Latitude 64°31,93'N Longitude 040°31,30'E	72	-
172	The berth No. 4	Latitude 64°31,91'N Longitude 040°31,38'E	51,5	1,87
173	The berth No. 5	Latitude 64°31,90' N	51,5	1,87

		Longitude 040°31,44' E		
174	The berth No. 6	Latitude 64°31,89' N Longitude 040°31,50'E	52	1,87
175	The berth No. 7	Latitude 64°31,88' N Longitude 040°31,56'E	99	1,87
176	The berth No. 8	Latitude 64 °31,83' N Longitude 040°31,57' E	45	1,87
177	The berth No. 9	Latitude 64° 31,82' N Longitude 040°31,62'E; Latitude 64°31,81'N Longitude 040°31,67'E	45	1,87
<b>The branch of JSC "Mostrotoy N 6" Mostootryad N 9"</b>				
178	The berth No. 1	Latitude 64°31,09'N Longitude 040°33,61'E; Latitude 64°31,00'N Longitude 040°34,07'E	446	-
<b>The MUI "Arkhkomkhoz"</b>				
179	The berth	Latitude 64°29,61'N Longitude 040°36,40'E; Latitude 64°29,60'N Longitude 040°36,41'E	20	-
<b>The FSBI "Administratsiya "Sevvodput" ("Sevvodput" Authorities)</b>				
180	The berth No. 1	Latitude 64°30,33'N Longitude 040°37,48'E Latitude 64°30,31'N Longitude 040°37,31'E	38,7	1,4
<b>The JSC "Arkhangelsk River Port" of the "Zharovikha" handling area</b>				
181	The berth No. 1	Latitude 64°28,85'N Longitude 040°43,33'E	120	4,25
182	The berth No. 2	Latitude 64°28,83'N Longitude 040°43,46'E	100	4,25
183	The berth No. 3	Latitude 64°28,80'N Longitude 040°43,57'E; Latitude 64°28,78'N Longitude 040°43,69'E	100	4,25
<b>The JSC "Zavod Silikatnogo kirpicha" (Silicate brick plant)</b>				
184	The berth No. 1	Latitude 64°28,86'N Longitude 040°46,03'E; Latitude 64°28,85'N Longitude 040°46,14'E	85,2	-
<b>The "Arkhangelsk ship demolishing plant" Ltd</b>				
185	The berth No. 1	Latitude 64°27,39'N Longitude 040°47,59'E; Latitude 64°27,34' N Longitude 040°47,08'E	150	-



<b>The JSC "Laisky dockyard"</b>				
186	The berth No. 1	Latitude 64°32,24'N Longitude 040°15,36'E; Latitude 64°32,22'N Longitude 040°15,27' E	80	4,6
187	The berth No. 2	Latitude 64°32,21'N' Longitude 040° 15,28'E; Latitude 64°32,21'N Longitude 040° 15,31'E	48	4,9
188	The berth No. 3	Latitude 64°32,21'N Longitude 040°15,33'E; Latitude 64°32,13' N Longitude 040° 15,25' E	160	4,7
<b>The JSC "Arkhangelskaya remontno-ekspluatatsionnaya baza flota" (Arkhangelsk repair and operating fleet base)</b>				
189	The berth No. 1	Latitude 64°27,82'N Longitude 040°39,87'E	135	-
190	The berth No. 2	Latitude 64°27,78'N Longitude 040°39,93'E; Latitude 64°27,73'N Longitude 040°39,96'E	95	-
191	The berth No. 3	Latitude 64°27,60'N Longitude 040°39,81'E	110	-
192	The berth No. 4	Latitude 64°27,56'N Longitude 040°39,72'E; Latitude 64°27,52'N Longitude 040°39,64'E	100	-
<b>The berths of the local passenger lanes of "The city of Arkhangelsk" municipality</b>				
193	The berth No. 1 (on the right side of the "Maimaksa" arm at the "Saw Mill No.22")	Latitude 64°38,87'N Longitude 040°31,36'E; Latitude 64°38,87'N Longitude 040°31,42'E	41,7	
194	The berth No. 2 (The "Brevennik" Island on the left side of the "Maimaksa" arm near the "Proezzhaya" street)	Latitude 64°38,69'N Longitude 040°30,65'E; Latitude 64°38,67'N Longitude 040°30,63'E	29,65	3,53
195	The berth No. 3 (on the right side of the "Maimaksa" arm near the "A.Petrov" street)	Latitude 64°36,92'N Longitude 40°29,46'E; Latitude 64°36,92'N Longitude 40°29,48' E	17,95	-
196	The berth No. 4 (The "Brevennik" Island on the left side of the	Latitude 64°36,84'N Longitude 040°29,25'E; Latitude 64°36,83'N Longitude 040°29,26'E	25,85	-

	“Maimaksa” arm )			
197	The berth No. 5 (on the “G.Sedov” Embankment in the “Solombalsky” territorial district)	Latitude 64°34,66'N Longitude 040°30,02'E; Latitude 64°34,64'N Longitude 040°30,02'E	28,9	4,17
<b>The "Saw Mill N 14" Ferry</b>				
198	The berth No. 1 (on the right side of the “Maimaksa” arm near the “A.Petrov” street)	Latitude 64°36,92'N Longitude 040°29,48'E; Latitude 64°36,91'N Longitude 040°29,49'E	15	-
199	The berth No. 2 (The “Brevennik” Island on the left side of the “Maimaksa” arm )	Latitude 64°36,86'N Longitude 040°29,23'E; Latitude 64°36,84' N Longitude 040°29,25'E	28,5	-

### **Data on the harbour roads**

The outer road “Vneshny reid” of the sea port is situated to the north from the “Mudyugsky No.1” light buoy near the anchorage No. 801 and is limited by straight lines connecting in order the points with coordinates:

1. Latitude 65°00,00' N Longitude 040°00,00'E;
2. Latitude 65°00,00'N Longitude 040°06,00'E;
3. Latitude 64°57,00'N Longitude 040°06,00'E';
4. Latitude 64°57,00N ' Longitude 040o00,00'E;
5. Latitude 65°00,00N ' Longitude 040°00,00E'.

The “Chizhovsky road” of the sea port is situated in the Maimaksa river mouth in the area limited by straight lines connecting in order the points with coordinates :

1. Latitude 64°45,50'N Longitude 040°29,48E;
2. Latitude 64°45,53'N Longitude 040°29,75'E;
3. Latitude 64°45,15'N Longitude 040°30,30'E;
4. Latitude 64°44,68'N Longitude 040°30,65'E;
5. Latitude 64°44,62N ' Longitude 040°30,15'E;
6. Latitude 64°45,50'N Longitude 040°29,48'E .

For guidance and control on vessel’s position the road is equipped with the “Reidovye “light lines (162,1° - 342,1°) and with 4 transversal “Anchor” lines. The “Anchor” lines No. 1, 2 - are unlighted and the lines No. 3,4 – are lighted. The road is divided into 4 anchorages in accordance with the “Anchor” lines numbering.

The “Solombalsky” road of the sea port is located in the “Korabelny” arm of the harbour opposite from the timber storage of the “Saw Mill No.16” and the “Saw Mill No.17” and consists of two sectors which are divided by the fairways of the “Amosovsky” and the “Udelninsky” lines.

The northern sector of the “Solombalsky” road is located in the area limited by straight lines connecting in order the points with coordinates :

1. Latitude 64°36,45'N Longitude 040°28,93E';
2. Latitude 64°36,42'N Longitude 040°29,45'E;
3. Latitude 64°36,00'N Longitude 040°29,38'E;
4. Latitude 64°36,00'N Longitude 040°29,25'E';
5. Latitude 64°36,45'N Longitude 040°28,93'E.

The northern sector is available for vessels of less than 100 meters in length and of less than 5,5 meters in draught.

The southern (the main) sector of the “Solombalsky” road is located in the area limited by straight lines connecting in order the points with coordinates :

1. Latitude 64°36,20'N Longitude 040°29,58E';
2. Latitude 64°36,20'N Longitude 040°29,77E';
3. Latitude 64°35,78'N Longitude 040°30,01'E;
4. Latitude 64°35,45'N Longitude 040°30,10'E;
5. Latitude 64°35,20'N Longitude 040°30,05'E;
6. Latitude 64°35,20'N Longitude 040°29,90'E;
7. Latitude 64°35,75'N Longitude 040°29,50'E;
8. Latitude 64°36,20'N Longitude 040°29,58'E.

The road of the “Maimaksansky” timber port is located in the “Korabelny” arm opposite from the berthes of the road down the river in the area limited by straight lines connecting in order the points with coordinates :

1. Latitude 64°37,35'N Longitude 040°26,20'E;
2. Latitude 64°37,35'N Longitude 040°26,70'E;
3. Latitude 64°36,90'N Longitude 040°27,60'E;
4. Latitude 64°36,90'N Longitude 040°27,00'E;
5. Latitude 64°37,35'N Longitude 040°26,20'E.

The City road is located in the area limited by straight lines connecting in order the points with coordinates :

1. Latitude 64°31,83' N Longitude 040°31,32'E;
2. Latitude 64°31,53'N Longitude 040°32,83'E;
3. Latitude 64°31,30'N Longitude 040°32,70'E;
4. Latitude 64°31,53'N Longitude 040°31,13'E;
5. Latitude 64°31,83'N Longitude 040°31,32'E.

The “Krasnoflotsky” road is located to the north of the “Krasnoflotsky” island in the area limited by straight lines connecting in order the points with coordinates :

1. Latitude 64°31,32' N Longitude 040°35,80'E;
2. Latitude 64°31,28'N Longitude 040°36,60'E;
3. Latitude 64°31,10'N Longitude 040°37,04'E;
4. Latitude 64°30,90'N Longitude 040°37,04'E;
5. Latitude 64°31,17'N Longitude 040°35,80'E;
6. Latitude 64°31,32'N Longitude 040°35,80'E.

The “Nizhne-Bakaritsky” road is located in the “Bakaritsa” channel to the east of the “Okulovsky” line axle in the area limited by straight lines connecting in order the points with coordinates:

1. Latitude 64°30,82'N Longitude 040°36,57'E;
2. Latitude 64°31,04'N Longitude 040°35,73'E;
3. Latitude 64°30,99'N Longitude 040°35,52'E;
4. Latitude 64°30,18'N Longitude 040°36,37'E;
5. Latitude 64°30,05'N Longitude 040°36,50'E;
6. Latitude 64°29,87'N Longitude 040°36,70'E;
7. Latitude 64°29,98'N Longitude 040°37,23'E;
8. Latitude 64°30,13'N Longitude 040°36,97'E;
9. Latitude 64°30,23'N Longitude 040°36,73'E;
10. Latitude 64°30,58'N Longitude 040°36,27'E .

The points No. 6 and 7 are located at the border line of the highway bridge security zone down the river; the western border of the “Nizhne-Bakaritsky” road is between the points No. 3 and 6 along the line which is located in 130 meters from the “Okulovsky” line axle.

The “Nizhne-Bakaritsky” road is divided into two parts by the security zone of the underwater crossing of the pipeline, located between lines, connecting the points No. 4 and 9; 5 and 8:

the part of the road above the security zone is located to the north of the parallel Latitude 64°30,18'N;

the part of the road below the security zone is located to the south of the parallel Latitude 64°30,05' N .

The “Verkhne-Bakaritsky” road is located to the north of the “Nizneturdeevsky” line axle in the area which is limited by the shore side of the “Krasnoflotsky” island passing on the upper boarder line of the highway bridge security zone up to the point with coordinates Latitude 64°29,43'N, Longitude 040°37,60'E onward via line of the “Nizhneturdeevsky” line parallel axle and in 130 meters from this line up to the point with coordinates Latitude 64°29,02' N, Longitude 040°39,4' E and from the last one – along the perpendicular axle of the indicated line up to the meter isobath at the “Krasnoflotsky” island and onward along this isobath it is locked on the line of the upper boarder line of the bridge security zone.

The “Zelenetsky” road is located in the “Nickolsky” arm to the south of the “Kegostrovsky” line axle in the area limited by straight lines connecting in order the points with coordinates :

1. Latitude 64°31,65'N Longitude 040°24,20'E;
2. Latitude 64°31,70'N Longitude 040°25,33'E';
3. Latitude 64°31,55'N Longitude 040°25,38'E;
4. Latitude 64°31,57'N Longitude 040°24,20'E';
5. Latitude 64°31,65'N Longitude 040°24,20'E.

**Appendix No.4  
of the Obligatory regulations  
(clauses 18,140)**

**Information on VHF channels used in the sea port**

The subscriber	VHF channels		Call sign
	Calling channel	Working channel	
Port State Control	16	14	"Arkhangelsk - Radio-5"
Vessel traffic system	16	14,69	"Arkhangelsk - Radio-17"
State Marine Rescue Sub center	16	2,25	"Arkhangelsk - Radio-1"
The central port radio	16	26	" Arkhangelsk - Radio-3"
Pilotage service	16	14	" Arkhangelsk - Radio-11"
Port fleet dispatcher	9	9	" Arkhangelsk - Radio-6"
Trawl fleet dispatcher	11	11	" Arkhangelsk - Radio-31"

**Information**  
**on minimal quantity and power of tugs required for mooring operations in the sea port**

Vessel's deadweight (tons)	Rated power of one tug (horse power/kilowatts)	Minimal quantity of tugs (mooring)	Minimal quantity of tugs (un-mooring)	Minimal quantity of tugs (shifting operations)
1	2	3	4	5
<b>Dry cargo and timber – carrying vessels</b>				
From 1500 up to 3500	600/441 (360/265)*	2	2	2
From 3501 up to 5000	600/441	2	2	2
From 5001 up to 9000	1200/882 (900/662)*	2	2	2
From 9001 up to 14000	1200/882 (1000/735)*	2	2	2
From 14001 up to 20000	1200/882	2	2	2
<b>Container vessels</b>				
From 1500 up to 5000	600/441	2	2	2
From 5001 up to 7000	1200/882 (900/662)*	2	2	2
From 7001 up to 8000	1200/882 (1000/735)*	2	2	2
From 8001 up to 14000	1200/882	2	2	2
<b>Bulkers and oil-bulk vessels</b>				
From 5000 up to 9000	1200/882 (900/662)*	2	2	2
From 9001 up to 14000	1200/882 (1000/735)*	2	2	2
From 14001 up to 28000	1200/882	2	2	2
<b>Oil-carrying vessels</b>				
From 1500 up to 4000	600/441 (360/265)*	2	2	2
From 4001 up to 7000	600/441	2	2	2
From 7001 up to 12000	1200/882 (900/662)*	2	2	2
From 12001 up to 18000	1200/882 (1000/735)*	2	2	2
From 18001 up to 33000	1200/882	2	2	2

<b>Passenger vessels</b>				
From 80 up to 100	600/441 (360/265)*	2	2	2
From 101 up to 120	600/441	2	2	2
From 121 up to 150	1200/882 (900/662)*	2	2	2
From 151 up to 170	1200/882 (1000/735)*	2	2	2
From 170 up to 190	1200/882	2	2	2

\* **Note:** Rated output, required for maneuvering of vessels of the indicated deadweight or length



**Data**

**on the sea port areas No. 41, 80, 80-A, 109, 110, 135 -137, 137-A, 138, 143, 143-A, 144, 144-A, 145 - 147, 150, 152 - 165, 166, 167, 169 - 177, “Ekonomiya” handling area”, “Bakaritsa” handling area, deviation ground**

The area No. 41 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 - Latitude 64°31,14' N Longitude 040°33,38' E;
- Point No. 2 - Latitude 64°31,20' N Longitude 040°33,63' E;
- Point No. 3 - Latitude 64°31,18' N Longitude 040°33,80' E;
- Point No. 4 - Latitude 64°31,13' N Longitude 040°34,00' E;
- Point No. 5 - Latitude 64°31,02' N Longitude 040°33,98' E.

The area No. 80 is limited by straight lines connecting the points with the following coordinates:

- Point No. 1 - Latitude 64°56,35' N Longitude 040°03,66' E;
- Point No. 2 - Latitude 64°57,10' N Longitude 040°07,46' E;
- Point No. 3 - Latitude 64°54,65' N Longitude 040°09,96' E;
- Point No. 4 - Latitude 64°53,95' N Longitude 040°06,16' E.

The area No. 80-A is limited by straight lines connecting the points with the following coordinates:

- Point No. 1 - Latitude 64°50,95' N Longitude 040° 14,96' E;
- Point No. 2 - Latitude 64°50,05' N Longitude 040°17,06' E;
- Point No. 3 - Latitude 64°50,35' N Longitude 040°17,79' E;
- Point No. 4 - Latitude 64°51,16' N Longitude 040°15,56' E.

The area No. 109 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 - Latitude 64°34,97' N Longitude 040°28,97' E;
- Point No. 2 - Latitude 64°34,78' N Longitude 040°29,86' E;
- Point No. 3 - Latitude 64°34,74' N Longitude 040°30,13' E and onward along the shore side line up to the point No. 4 with coordinates: Latitude 64°34,34' N Longitude 040°30,23' E;
- Point No. 5 -Latitude 64°34,040' N Longitude 040°29,55' E;
- Point No. 6 -Latitude 64°34,49' N Longitude 040°29,07' E;
- Point No. 7 - Latitude 64°34,62' N Longitude 040°28,52' E and onward along the shore side line up to the point No. 1.

The area No. 110 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 - Latitude 64°31,91' N Longitude 040°28,21' E;
- Point No. 2 - Latitude 64°31,84' N Longitude 040°28,30' E;
- Point No. 3 - Latitude 64°31,97' N Longitude 040°29,56' E;
- Point No. 4 - Latitude 64°32,18' N Longitude 040°30,74' E and onward along the shore side line up to the point No. 5 - Latitude 64°32,28' N Longitude 040°30,66' E;
- Point No. 6 - Latitude 64°32,13' N Longitude 040°29,31' E;

Point No. 7 - Latitude 64°32,00' N Longitude 040°28,57' E and onward along the shore side line up to the point No. 1.

The area No. 135 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 - Latitude 64°46,28' N Longitude 040°24,79' E;
- Point No. 2 - Latitude 64°46,35' N Longitude 040°25,11' E;
- Point No. 3 - Latitude 64°46,27' N Longitude 040°25,33' E;
- Point No. 4 - Latitude 64°46,00' N Longitude 040°25,80' E;
- Point No. 5 - Latitude 64°45,84' N Longitude 040°25,08' E.

The area No. 136 is limited by straight lines connecting the points with the following coordinates:

- Point No. 1 - Latitude 64°42,15' N Longitude 040°14,50' E;
- Point No. 2 - Latitude 64°42,27' N Longitude 040°14,76' E;
- Point No. 3 - Latitude 64°41,57' N Longitude 040°16,10' E;
- Point No. 4 - Latitude 64°41,52' N Longitude 040°16,02' E.

The area No. 137 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 - Latitude 64°32,20' N Longitude 040°29,40' E;
- Point No. 2 - Latitude 64°32,74' N Longitude 040°29,27' E;
- Point No. 3 - Latitude 64°32,75' N Longitude 040°29,45' E;
- Point No. 4 - Latitude 64°32,12' N Longitude 040°29,87' E;
- Point No. 5 - Latitude 64°32,10' N Longitude 040°29,73' E;
- Point No. 6 - Latitude 64°31,88' N Longitude 040°29,90' E;
- Point No. 7 - Latitude 64°31,87' N Longitude 040°29,74' E.

The area No. 13 7-A is limited by straight lines connecting the points with the following coordinates:

- Point No. 1 - Latitude 64°31,80' N Longitude 040°29,98' E;
- Point No. 2 - Latitude 64°32,10' N Longitude 040°29,73' E;
- Point No. 3 - Latitude 64°32,12' N Longitude 040°29,87' E;
- Point No. 4 - Latitude 64°31,82' N Longitude 040°30,08' E.

The area No. 138 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 - Latitude 64°32,72' N Longitude 040°11,01' E;
- Point No. 2 - Latitude 64°33,01' N Longitude 040°11,01' E;
- Point No. 3 - Latitude 64°32,96' N Longitude 040°13,90' E;
- Point No. 4 - Latitude 64°32,78' N Longitude 040°13,90' E.

The area No. 143 is limited by circle with radius of 900 meters from the point with coordinates Latitude 64°55,00' N Longitude 040°03,00' E.

The area No. 143-A is limited by circle with radius of five cables from the point with coordinates Latitude 64°53,00' N Longitude 040°03,00' E.

The area No. 144 is limited by straight lines connecting the points with coordinates:

- Point No. 1 - Latitude 64°54,62' N Longitude 040°04,63' E;
- Point No. 2 - Latitude 64°55,19' N Longitude 040°06,12' E;
- Point No. 3 - Latitude 64°54,78' N Longitude 040°06,92' E;
- Point No. 4 - Latitude 64°54,28' N Longitude 040°05,29' E.

The area No. 144-A is limited with circle with radius of 0,5 nautical miles from the point with coordinates: Latitude 64°58,00' N Longitude 040°08,00' E.

The area No. 145 is limited by circle with radius of five cables from the point with coordinates: Latitude 64°49,5' N Longitude 039°58,5' E.

The area No. 146 is limited by circle with radius of five cables from the point with coordinates: Latitude 64°50,5' N Longitude 040°01,0' E.

The area No. 147 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 - Latitude 64°28,03' N Longitude 040°43,72' E;

Point No. 2 - Latitude 64°28,03' N Longitude 040°44,80' E;

Point No. 3 - Latitude 64°28,00' N Longitude 040°45,38' E;

Point No. 4 - Latitude 64°27,87' N Longitude 040°45,38' E;

Point No. 5 - Latitude 64°27,90' N Longitude 040°44,80' E;

Point No.6 - Latitude 64°27,90' N Longitude 040°44,00' E.

The area No. 150 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 - Latitude 64°47,18' N Longitude 040°23,78' E;

Point No. 2 - Latitude 64°47,20' N Longitude 040°23,89' E;

Point No. 3 - Latitude 64°46,82' N Longitude 040°24,74' E;

Point No. 4 - Latitude 64°46,75' N Longitude 040°24,55' E.

The area No. 152 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 - Latitude 64°44,56' N Longitude 040°30,42' E;

Point No. 2 - Latitude 64°44,58' N Longitude 040°30,70' E;

Point No. 3 - Latitude 64°44,09' N Longitude 040°30,70' E.

The area No. 153 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 - Latitude 64°44,56' N Longitude 040°30,00' E;

Point No. 2 - Latitude 64°44,30' N Longitude 040°30,21' E;

Point No. 3 - Latitude 64°44,31' N Longitude 040°30,00' E.

The area No. 154 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 - Latitude 64°42,99' N Longitude 040°30,77' E;

Point No. 2 - Latitude 64°42,93' N Longitude 040°30,90' E;

Point No. 3 - Latitude 64°42,73' N Longitude 040°30,57' E;

Point No. 4 - Latitude 64°42,78' N Longitude 040°30,48' E.

The area No.155 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 - Latitude 64°45,12' N Longitude 040°01,10' E;

Point No. 2 - Latitude 64°44,45' N Longitude 040°03,10' E;

Point No. 3 - Latitude 64°44,22' N Longitude 040°04,90' E;

Point No. 4 - Latitude 64°44,12' N Longitude 040°04,82' E;

Point No. 5 - Latitude 64°44,32' N Longitude 040°02,96' E;

Point No. 6 - Latitude 64°45,02' N Longitude 040°00,88' E.

The area No. 156 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No.1 – Latitude 64°38,52' N Longitude 040°18,48' E;  
Point No. 2 – Latitude 64°38,35' N Longitude 040°18,23' E;  
Point No. 3 – Latitude 64°38,10' N Longitude 040°19,85' E;  
Point No. 4 – Latitude 64°38,24' N Longitude 040°19,90' E.

The area No.157 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°37,23' N Longitude 040°26,13' E;  
Point No. 2 – Latitude 64°37,18' N Longitude 040°25,83' E;  
Point No. 3 – Latitude 64°36,85' N Longitude 040°26,51' E;  
Point No. 4 – Latitude 64°36,93' N Longitude 040°26,82' E.

The area No. 158 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No.1 – Latitude 64°36,71' N Longitude 040°27,28' E;  
Point No. 2 – Latitude 64°36,54' N Longitude 040°27,68' E;  
Point No. 3 – Latitude 64°36,42' N Longitude 040°27,48' E;  
Point No. 4 – Latitude 64°36,63' N Longitude 040°27,12' E.

The area No. 159 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°36,18' N Longitude 040°28,57' E;  
Point No. 2 – Latitude 64°36,23' N Longitude 040°28,92' E;  
Point No. 3 – Latitude 64°36,00' N Longitude 040°29,05' E;  
Point No. 4 – Latitude 64°35,98' N Longitude 040°28,85' E.

The area No. 160 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°33,53' N Longitude 040°29,32'E;  
Point No. 2 – Latitude 64°33,49' N Longitude 040°29,56'E;  
Point No. 3 – Latitude 64°33,09' N Longitude 040°29,22'E;  
Point No. 4 – Latitude 64°33,09' N Longitude 040°28,94'E.

The area No. 161 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°32,53' N Longitude 040°28,83'E;  
Point No. 2 – Latitude 64°32,58' N Longitude 040°29,12'E;  
Point No. 3 – Latitude 64°32,07' N Longitude 040°29,49'E;  
Point No. 4 – Latitude 64°32,03' N Longitude 040°29,05'E.

The area No. 162 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°33,31' N Longitude 040°21,00'E;  
Point No. 2 – Latitude 64°33,39' N Longitude 040°21,20'E;  
Point No. 3 – Latitude 64°32,84' N Longitude 040°22,23'E;  
Point No. 4 – Latitude 64°32,78' N Longitude 040°22,02'E.

The area No. 163 is limited by shore side line and by straight lines connecting in order the points

with the following coordinates:

- Point No. 1 – Latitude 64°31,48' N Longitude 040°25,23'E;
- Point No. 2 – Latitude 64°31,57' N Longitude 040°25,27'E;
- Point No. 3 – Latitude 64°31,57' N Longitude 040°26,07'E;
- Point No. 4 – Latitude 64°31,48' N Longitude 040°26,07'E.

The area No. 164 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 – Latitude 64°30,15' N Longitude 040°35,97'E;
- Point No. 2 – Latitude 64°30,17' N Longitude 040°36,07'E;
- Point No. 3 – Latitude 64°29,86' N Longitude 040°36,040'E;
- Point No. 4 – Latitude 64°29,84' N Longitude 040°36,24'E.

The area No.165 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 at 346,5° in 1170 meters from the back light shape of the “Obratny Tralbazovsky” approaching line (Latitude 64°29,9' N Longitude 040°38,6'E);
- Point No. 2 at 63° in 125 meters from the point No.1;
- Point No. 3 at 142° in 300 meters from the point No. 2;
- Point No. 4 at 243° in 130 meters from the point No. 3.

The area No. 166 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 – Latitude 64°42,45' N Longitude 040°35,50'E;
- Point No. 2 – Latitude 64°42,38' N Longitude 040°35,80'E;
- Point No. 3 – Latitude 64°42,27' N Longitude 040°35,65'E;
- Point No. 4 – Latitude 64°42,32' N Longitude 040°35,35'E.

The area No. 167 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 – Latitude 64°42,05' N Longitude 040°32,65'E;
- Point No. 2 – Latitude 64°42,16' N Longitude 040°32,70'E;
- Point No. 3 – Latitude 64°42,22' N Longitude 040°33,00'E;
- Point No. 4 – Latitude 64°42,03' N Longitude 040°32,96'E.

The area No. 169 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 – Latitude 64°39,28' N Longitude 040°31,040'E;
- Point No. 2 – Latitude 64°39,32' N Longitude 040°31,81'E;
- Point No. 3 – Latitude 64°39,46' N Longitude 040°31,75'E;
- Point No. 4 – Latitude 64°39,41' N Longitude 040°31,37'E.

The area No. 170 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 – Latitude 64°38,16' N Longitude 040°30,70'E;
- Point No. 2 – Latitude – Latitude 64°38,20' N Longitude 040°31,12'E;
- Point No. 3 – Latitude 64°38,43' N Longitude 040°31,07'E;
- Point No. 4 – Latitude 64°38,38' N Longitude 040°30,60'E.

The area No.171 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

- Point No. 1 – Latitude 64°37,44' N Longitude 040°29,44'E;

Point No. 2 – Latitude 64°37,55' N Longitude 040°29,35'E;  
Point No. 3 – Latitude 64°37,61' N Longitude 040°29,64'E;  
Point No. 4 – Latitude 64°37,51' N Longitude 040°29,75'E.

The area No. 172 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No.1 – Latitude 64°37,12' N Longitude 040°29,30'E;  
Point No. 2 – Latitude 64°37,12' N Longitude 040°28,90'E;  
Point No. 3 – Latitude 64°37,32' N Longitude 040°28,85'E;  
Point No. 4– Latitude 64°37,32' N Longitude 040°29,23'E.

The area No. 173 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°33,80' N Longitude 040°31,64'E;  
Point No. 2 – Latitude 64°33,97' N Longitude 040°31,34'E;  
Point No. 3 – Latitude 64°34,22' N Longitude 040°31,95'E;  
Point No. 4– Latitude 64°34,01' N Longitude 040°32,38'E.

The area No. 174 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°32,23' N Longitude 040°23,45'E;  
Point No. 2 – Latitude 64°31,93' N Longitude 040°22,54'E;  
Point No. 3 – Latitude 64°31,63' N Longitude 040°23,33'E;  
Point No. 4 – Latitude 64°31,95' N Longitude 040°24,05'E.

The area No. 175 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°31,19' N Longitude 040°33,10'E;  
Point No.2 – Latitude 64°31,56' N Longitude 040°33,32'E;  
Point No. 3 – Latitude 64°31,48' N Longitude 040°35,12'E;  
Point No. 4 – Latitude 64°30,83' N Longitude 040°34,75'E.

The area No. 176 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°30,68' N Longitude 040°38,60'E;  
Point No. 2 – Latitude 64°30,50' N Longitude 040°38,10'E;  
Point No. 3 – Latitude 64°30,32' N Longitude 040°38,47'E;  
Point No. 4 – Latitude 64°30,60' N Longitude 040°39,22'E.

The area No. 177 is limited by shore side line and by straight lines connecting in order the points with the following coordinates:

Point No. 1 – Latitude 64°30,25' N Longitude 040°36,82'E;  
Point No. 2 – Latitude 64°30,10' N Longitude 040°35,95'E;  
Point No. 3 – Latitude 64°29,97' N Longitude 040°36,08'E;  
Point No. 4 – Latitude 64°30,14' N Longitude 040°37,07'E.

The “Ekonomiya” handling area is situated at the left shore side of the “Kuznechikha” river close to the mouth of this river, the distance from the “Mudyugsky No. 1” light buoy – 18,5 nautical miles.

The ”Bakaritsa” handling area is situated at the left shore side of the Northern Dvina river (Latitude 64°28,6' N Longitude 040°36,6'E), the distance from the “Mudyugsky No. 1” light buoy - 36 nautical miles.

The deviation ground is limited by the straight lines connecting in order the points with coordinates:

Point No. 1 – Latitude  $64^{\circ}31,47'$  N Longitude  $040^{\circ}30,60'E$ ;

Point No. 2 – Latitude  $64^{\circ}32,01'$  N Longitude  $040^{\circ}30,20'E$ ;

Point No. 3 – Latitude  $64^{\circ}31,80'$  N Longitude  $040^{\circ}31,30'E$ ;

Point No. 4 – Latitude  $64^{\circ}31,47'$  N Longitude  $040^{\circ}31,17'E$ .

**Data on raft dimensions allowed for towing within the harbour**

N	The sector of the harbour	Raft sizes in meters (length and breadth)
1	In the "Bakaritsa" channel	160 x 300
2	In the "Maimaksa" river when one-way traffic is stated	60 x 335
3	Above the highway bridge across the main Northern Dvina riverbed up to the sorting stations	100 x 500 60 x 700
4	At all the rest areas of the harbour	80 x 415



**Data on tugs' power and minimum number necessary for rafts safe towage within the harbour.**

<b>Raft sizes in meters (length and breadth)</b>	<b>Minimum number and power of tugs (hours powers /kW)</b>
500 x 100	1 x 600/441 5 x 300/221
700 x 60	1 x 600/441 5 x 300/221
415 x 80	1 x 600/441 4 x 300/221
300 x 160	1 x 600/441 4 x 300/221
335 x 60	1 x 600/441 2 x 300/221
240 x 40	1 x 450/331 2 x 300/221

**Note:** while increasing the power of tugs their total number shouldn't be less than indicated in the table above.

**Data on ice crossings within the harbour**

1. Ice crossings are formed in the following areas of the harbour:
  - “Ekonomiya” handling area – the “Reushenga” settlement;
  - “Ekonomiya” handling area – the “Saw mill No.29”;
  - the “Saw mill No.24” - the “Saw mill No.26”;
  - the “Saw mill No.22” - the “Saw mill No.23”;
  - the “Brevnik” island - the “Saw mill No.14”;
  - the “Khabarka” island – the “Solombalsky engineering plant”
  - the “Pur-Navolok”- the “Kego” island.
2. The traffic timetable via ice-crossings is given to the attention of seafarers by the Harbour master and on the [www.mapa.ru](http://www.mapa.ru) website annually and if changed.
3. Pedestrians ice-crossings are marked:
  - at dark time – by red all round light, exhibited at the height of not less than 5 meters (the signal mast of the red all round light is installed in 10 meters from the edge of one side of ice canal);
  - at day time – by landmarks with red flags, installed on the both sides of ice canal up and down the crossing.
4. Adjustable ice-crossing is formed between the “Saw mill No. 14” settlement and the “Brevnik” island.
5. The right edge of fixed part of transport ice-crossing is marked by the red light which can be seen throughout the horizon and which is installed on the height of not less than 5 meters.
6. The left edge of fixed part of transport ice-crossing is marked by the red and the green lights which can be seen throughout the horizon and which are installed on the height of not less than 5 meters.
7. The red light of the left edge of fixed part of transport ice-crossing is to be switched on when the transport ice-crossing is closed for vessel traffic.
8. The green light of the left edge of fixed part of transport ice-crossing is to be switched on when the transport ice-crossing is opened for vessel traffic.

**Appendix No. 10**  
**of the Obligatory regulations (clauses 50, 68, 73, 81, 87)**

**Fairways' dimensions for passage of vessels under unlifting bridges spans**

N	The name of bridge	The span between bridge abutments	The height of bridge span from the calculated high waters * (meters)	The fairway breadth (meters)
1	The highway bridge across the "Bakaritsky" arm	No. 2L** и 3L**	up to 13,5	110
		No. 4L** и 5L**	up to 13,5	110
		No. 6L** и 7L**	up to 13	110
2	The highway bridge across the main Northern Dvina riverbed	No. 2P** и 3P**	up to 13,5	100
		No. 3P** и 4P**	up to 13,5	120
		No. 4P** и 5P**	up to 13,5	120
3	The railway bridge across the Northern Dvina river	No. 2 и 3	up to 13,2	140
		No. 4 и 5	up to 13,2	140
4	The highway bridge across the Kuznecikha river	No. 2 и 3	up to 6,7	100
5	The pipeline bridge across the Kuznecikha river	No. 2 и 3	up to 6,7	80
6	The railway bridge across the Kuznecikha river	No. 2 и 3	up to 6,7	80

\* The height of bridge span from the calculated high waters indicates the span height from the calculated high waters which is the minimal for passing of vessels. The calculated high waters level in the harbour is 3,25 meters above the zero depth of the year 1881 and it is marked with the white paint on bridge abutments of the vessel fairway. The vessel spar height calculated from the operative waterline must not exceed the indicated height of bridge span from the calculated high waters.

\*\* The letter "L" is assigned to the numbers of the highway bridge abutments in the "Bakaritsky" arm and the letter "P" is assigned to the numbers of the highway bridge abutments across the main Northern Dvina riverbed.

**Restrictions on navigating in ice within the harbour\***

Ice conditions	Vessels allowed to navigate in ice with ice-breaker assistance or independently	Vessels allowed to navigate in ice only with ice-breaker assistance	Vessels not allowed to navigate in ice
The thickness of platformed ice is of 10-15 centimeters	Vessels of Ice 1 class and above	Vessels without Ice class	Towage and barge convoys
The thickness of platformed ice is of 15-30 centimeters	Vessels of Ice 2 class and above	Vessels of Ice1 class	Vessels without Ice class, towage and barge convoys
The thickness of platformed ice is of 30-50 centimeters	Vessels of Ice 3 class and above	Vessels of Ice1 and Ice2 classes	Vessels without Ice class, towage and barge convoys
The thickness of platformed ice is greater than 50 centimeters	Vessels of Arc4 class and above	Vessels of Ice2 and Ice3 classes	Vessels without Ice class and of Ice 1 class, towage and barge convoys

\* Ice classes of vessels are defined in the Russian maritime register of shipping classification rules

**Appendix No. 12**  
**of the Obligatory regulations**  
**(clause 129)**

**Data**  
**on positions of laying and on berths protected from ice-drifting**

The clause No.	The sea port area with places available for laying	The berths numbers
1	The "Ekonomiya" handling area	5, 6, 7
2	The "Ekonomsky" traffic dispatcher office	8
3	The "Bakaritsa" handling area	134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145
4	The "Maimaksansky" handling area of JSC "Arkhangelsk trawl fleet"	1, 2, 3, 4
5	The maintenance base (MB) of trawl fleet	5, 6, 7, 8
6	The "Krasnaya Kuznetsa" dockyard bucket	68, 69, 70, 71, 72, 73, 74, 75
7	The "Laysky" dockyard	1, 2, 3
8	The "Krasnaya pristan"	98, 99, 100, 101, 104, 105, 106, 108, 109, 110, 111
9	"Arkhangelskaya remontno-ekspluatatsionnaya baza flota" (Arkhangelsk repair and operating fleet base)	1, 2, 3, 4
10	The "Solombalskaya" shipyard	51, 52
11	The berth of FBSI "Sevvodput"	Without a number
12	The berth of northern branch of "GOSAKVASPAS"	32

**Data on raft laying places within the harbour**

The name	Coordinates	
	Latitude North	Longitude East
1	2	3
The raft laying place No. 1	64°27,42' 64°27,75' 64°27,79' 64°27,46'	040°47,53' 040°46,24' 040°46,31' 040°47,58'
The raft laying place No. 2	64°28,06' 64°28,17' 64°28,22' 64°28,10'	040°46,04' 040°45,07' 040°45,09' 040°46,05'
The raft laying place No. 3	64°28,30' 64°28,45' 64°28,34' 64°28,38' 64°28,49' 64°28,34'	040°46,21' 040°45,73' 040°44,86' 040°44,84' 040°45,75' 040°46,27'
The raft laying place No. 4	64°28,82' 64°28,81' 64°28,85' 64°28,86'	040°48,04' 040°47,53' 040°47,53' 040°48,03'
The raft laying place No. 5	64°28,76' 64°29,09' 64°29,13' 64°28,80'	040°39,00' 040°37,72' 040°37,78' 040°39,04'
The raft laying place No. 6	64°29,32' 64°29,54' 64°29,54' 64°29,32'	040°39,56' 040°39,49' 040°39,60' 040°39,66'
The raft laying place No. 7	64°28,95' 64°29,31' 64°29,36' 64°29,00'	040°42,56' 040°41,52' 040°41,60' 040°42,79'
The raft laying place No. 8	64°30,20' 64°30,36' 64°30,43' 64°30,27'	040°39,98' 040°39,63' 040°39,75' 040°40,13'
The raft laying place No. 9	64°30,50' 64°30,62' 64°30,68' 64°30,57'	040°39,15' 040°38,47' 040°38,54' 040°39,20'
The raft laying place No. 10	64°31,22' 64°31,36' 64°31,41' 64°31,26'	040°37,00' 040°36,18' 040°36,21' 040°37,02'

The raft laying place No. 11	64°31,04' 64°31,47' 64°31,51' 64°31,44'	040°27,88' 040°27,41' 040°27,44' 040°27,91'
The raft laying place No. 12	64°31,75' 64°31,86' 64°31,90' 64°31,79'	040°24,35' 040°23,91' 040°23,95' 040°24,04'
The raft laying place No. 13	64°31,18' 64°31,34' 64°31,38' 64°31,22'	040°24,29' 040°23,76' 040°23,84' 040°24,34'
The raft laying place No. 14	64°32,23' 64°32,22' 64°32,00' 64°32,00'	040°21,74' 040°21,87' 040°21,87' 040°21,67'
The raft laying place No. 15	64°34,18' 64°34,58' 64°34,53' 64°34,13'	040°31,86' 040°32,33' 040°32,55' 040°32,02'
The raft laying place No. 16	64°34,24' 64°34,35' 64°34,25' 64°34,15'	040°32,58' 040°33,00' 040°33,11' 040°32,68'
The raft laying place No. 17	64°34,68' 64°35,16' 64°35,04' 64°34,62'	040°32,73' 040°34,29' 040°34,41' 040°32,88'
The raft laying place No.18	64°36,11' 64°36,12' 64°36,02' 64°36,02'	040°29,85' 040°29,89' 040°29,96' 040°29,92'
The raft laying place No. 19	64°36,58' 64°36,58' 64°36,35' 64°36,34'	040°29,61' 040°29,74' 040°29,76' 040°29,62'
The raft laying place No. 20	64°36,73' 64°36,64' 64°36,60' 64°36,69'	040°28,10' 040°28,33' 040°28,25' 040°28,01'
The raft laying place No. 21	64°37,24' 64°37,15' 64°37,12' 64°37,21'	040°27,03' 040°27,20' 040°27,12' 040°26,95'
The raft laying place No. 22	64°36,54' 64°36,55' 64°36,53' 64°36,51'	040°29,06' 040°29,23' 040°29,23' 040°29,06'
The raft laying place No. 23	64°38,72' 64°38,98' 64°38,98'	040°30,69' 040°31,04' 040°31,06'

	64°38,71'	040°30,74'
The raft laying place No. 24	64°39,59' 64°39,62' 64°39,46' 64°39,44'	040°30,89' 040°30,98' 040°31,21' 040°31,13'
The raft laying place No. 25	64°39,88' 64°39,92' 64°39,78' 64°39,62' 64°39,59' 64°39,72'	040°30,15' 040°30,21' 040°30,68' 040°30,98' 040°30,89' 040°30,65'
The raft laying place No. 26	64°39,62' 64°39,64' 64°38,93' 64°38,95' 64°39,21' 64°39,50'	040°31,29' 040°31,34' 040°31,42' 040°31,28' 040°31,58' 040°31,48'
The raft laying place No. 27	64°40,04' 64°39,95' 64°39,92' 64°40,01'	040°30,28' 040°30,65' 040°30,61' 040°30,24'
The raft laying place No. 28	64°40,19' 64°40,21' 64°40,04' 64°40,02'	040°29,38' 040°29,43' 040°29,74' 040°29,70'
The raft laying place No. 29	64°41,03' 64°41,10' 64°40,97' 64°40,82' 64°40,80'	040°28,81' 040°28,94' 040°29,22' 040°29,35' 040°29,26'
The raft laying place No. 30	64°40,50' 64°40,49' 64°40,26' 64°40,25' 64°40,35'	040°29,58' 040°29,74' 040°29,76' 040°29,71' 040°29,61'
The raft laying place No. 31	64°41,04' 64°41,07' 64°40,58' 64°40,57' 64°40,77'	040°29,37' 040°29,45' 040°29,87' 040°29,66' 040°29,63'