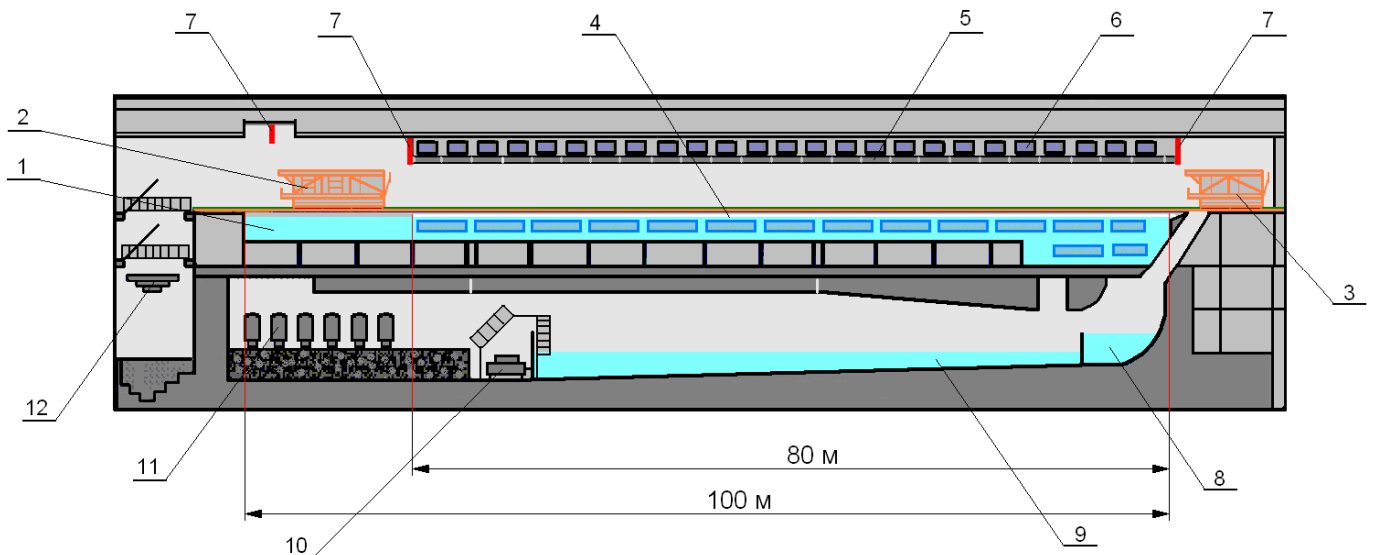


<b>Name of organization</b> <i>Krylov State Research Centre</i>		<b>Year of information updating</b> <i>2016</i>	
<b>Year established</b> <i>1894</i>		<b>Year of joining the ITTC</b> <i>1955</i>	
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<b>Type of facility</b> <i>Ice Tank</i>		<b>Year constructed/upgraded</b> <i>2014</i>	
<b>Name of facility</b> <i>Ice Basin</i>		<b>Location</b> —	

**Main characteristics** (dimensions of tank/basin/test section; for simulators: full mission, part task or desk top)  
*Length – 100 m, Length of ice sheet – 80 m, Width – 10 m, Depth – 2 m;*  
*for simulators: full mission*

**Drawings of facility**

Plan (Longitudinal-section-view plan)



*1- model outfitting bay; 2 – towing carriage; 3 – service carriage; 4 – side and bottom viewports ; 5 – cooling system, panel batteries; 6 – warm-up system; 7 – heat insulation shutters; 8 – ice melting section; 9 – water storage tank; 10 – water transfer pumps; 11 - filters; 12 – model elevator shaft*

**Detailed characteristics** (carriages, wave/current/wind generators, instrumentation, etc.)

*Description of carriage: manned towing carriage, velocity 0.0005 – 1.5 m/s with program-controlled sub-carriage (running cross-wise);*  
*manned auxiliary carriage 0.0005 – 1.5 m/s;*

*Side and bottom viewports for visualization of processes;*  
*False bottom to simulate seabed for offshore platform tests;*

*The sizes of tested models:*

<i>Length models of ships</i>	<i>3 to 10 m.</i>
<i>Size of offshore structure models</i>	<i>up to 3.5×3.5 m.</i>
<i>Diameter of propellers</i>	<i>0.1 to 0.35 m</i>

*No wave generator*

**Applications (Tests performed)**

The ice basin is capable of modeling and reproducing the following ice conditions:

- continuous level fast and drifting ice;
- brash ice, broken ice, ice floes;
- ice ridges, ice hillocks, rubble ice;
- simulation of ice compression processes;
- fresh and old channels in ice.

1. *Towing & self-propulsion model tests for various types of surface ships & vessels in different ice conditions*
2. *Determination of ice loads on offshore structures in various ice conditions.*
3. *Milling tests of propellers and evaluation of ice loads on propulsion pods.*

**Published description (Publications on this facility)**

Timofeev O.Ya., Sazonov K.E., Dobrodeev A.A. New ice basin of the Krylov State Research Centre.

Proceedings of the 23rd International Conference on Port and Ocean Engineering under Arctic Conditions. June 14-18, 2015, Trondheim, Norway

Timofeev O.Ya., Sazonov K.E., Dobrodeev A.A. Ice class! The Naval Architect, July/Aug 2015, pp.43-45