

Name of organization National Maritime Research Institute	Year of information updating 2016
Year established 2001 (1916 established as the Ship Equipment Inspection Station)	Year of joining the ITTC
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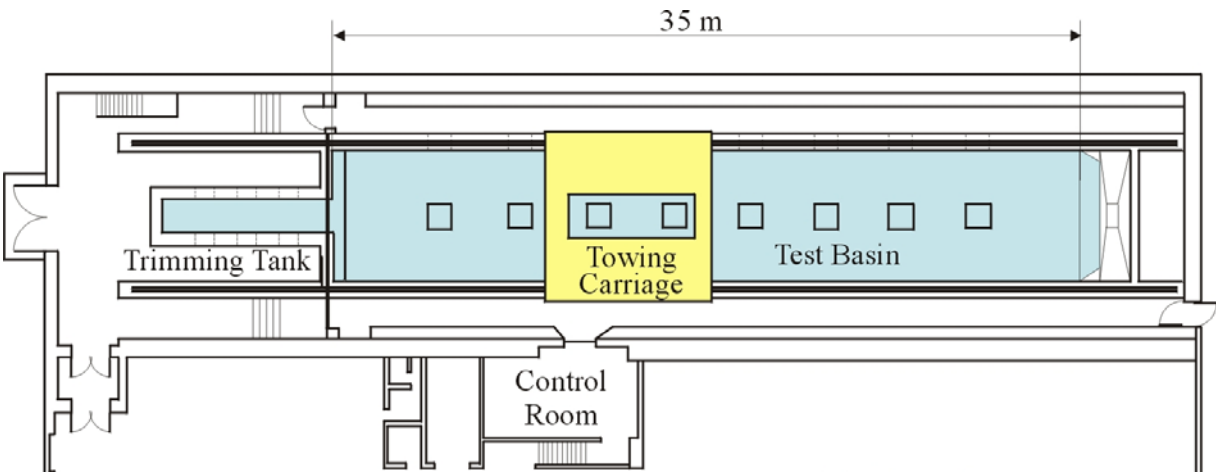
Type of facility Ice Model Basin	Year constructed/upgraded 1981
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Name of facility Ice Model Basin	Location (if different from the above address)
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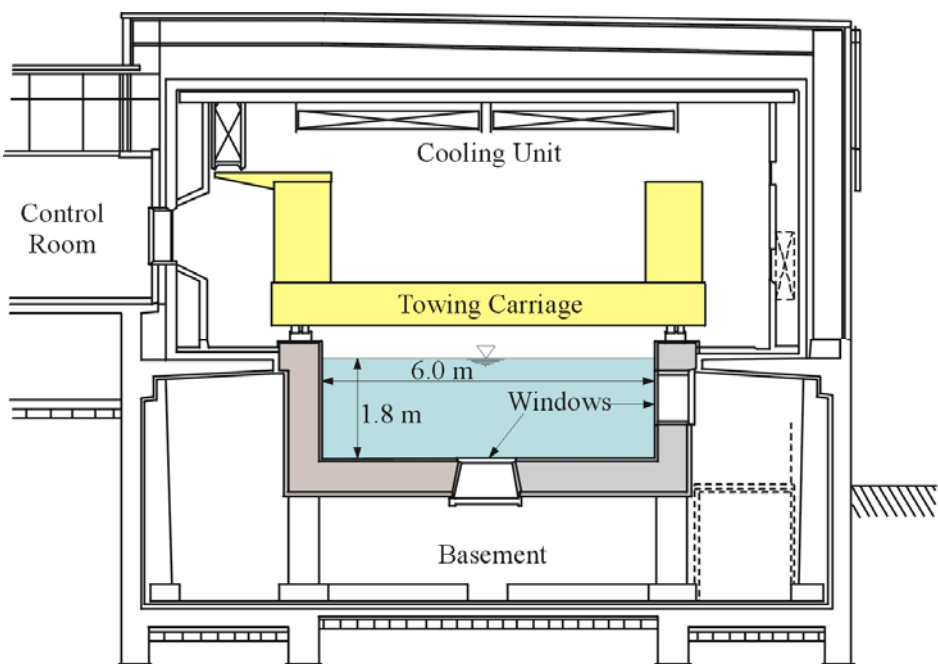
Main characteristics (dimensions of tank/basin/test section; for simulators: full mission, part task or desk top)
Length: 35m, Width: 6m, Depth: 1.8m. Freezing Capacity: 40mm thick ice in 15 hours. Maximum Carriage Speed: 2.0m/s.

Drawings of facility

Top-view plan



Corss-section-view plan



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

Description of Facility:

Ice model basin of ceiling cooler type, natural and forced convection. Main tank: 35.0m long, 6.0m wide and 1.8(2.1)m deep. Trimming tank: 8.0m long, 1.6m wide and 0.9m deep.

Freezing Capacity:

40mm thick level ice in 15 hours. 121,700Kcal/hr for ceiling coolers, 107,500Kcal/hr for pre-cooling of water, basement and trimming tank room. Lowest temperature of main tank: -35degC. Maximum ice thickness: 300mm.

Kind of model ice:

PG (Propylene Glycol) ice. ~~Columnar~~Columnar structure. Density ~~controlable~~controllable with air bubbles.

Description of Carriage:

Motor driven. Drive system: Thyristor leonard type, 30kW. Wheel on rail with pinion-rack system. Capacity: 50kN. Maximum carriage speed: 2.0m/s.

Instrumentation:

Resistance and self-propulsion dynamometers, ice strength and elasticity measurement devices, slider tester for friction ~~measuremenet~~measurement, etc.

Applications (Tests performed)

- (1)Resistance tests in ice.
- (2)Self-propulsion tests in ice.
- (3)Maneuvering tests in ice.
- (4)Ice load on structure measurements.
- (5)Oil in ice recovery tests.

Type of ice in tests: level, floe, brash ice channel, ridge.

Typical model size: 3 to 8m.

Published description (Publications on this facility)

Autumn Meeting of SRI, No.36, Dec., 1980.