

Name of organization Research Institute of Medium & Small Shipbuilding (RIMS)		Year of information updating 2022
Year established 1997		Year of joining the ITTC 2022
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Type of facility Towing Tank	Year constructed/upgraded 2021	
Name of facility High-speed Towing Tank	Location 23, Mieumsandan 5-ro 42beon-gil, Gangseo-gu, Busan, Korea	
Main characteristics Length x Width x Depth = 380 x 8 x 5.5 m		
Drawings of facility		
Detailed characteristics		
<ul style="list-style-type: none"> • Towing carriage <ul style="list-style-type: none"> 1) High-speed Towing Carriage <ul style="list-style-type: none"> - Driven by AC servo motors, 30 kW x 8 wheel sets - Max. speed: 13 m/s (max. acc.: 0.6 m/s²) - Unmanned control over 8 m/s 2) Super high-speed Towing Carriage <ul style="list-style-type: none"> - Towed by wire rope winch system (towing 375 kW, tension 55 kW) - Max. speed: 40 m/s (max. acc.: 5 m/s²) - Unmanned control for full speed range • Wave generator <ul style="list-style-type: none"> - 1.0m x 8 segments piston type, server motor driven - Wave height of regular wave: $H \leq 0.5$ m, irregular wave: $H_s \leq 0.3$ m - Range of generated wave periods: $0.5 \text{ sec} \leq T \leq 5.0 \text{ sec}$ • Other facilities <ul style="list-style-type: none"> - Front and side beaches for wave absorber (permeable panel type) - Model ship lifting table for test preparation in the trimming tank - HPMM test system (to be installed) • Instrumentation 		

Resistance dynamometers, Propulsion dynamometers, Propeller open-water test dynamometer, Rudder force dynamometer, Pitot tubes wake rake system, Pitot tube traverse system, Optical motion measurement devices

- Max. model size: Ship(wood) length 6 m, Propeller(aluminum) diameter 200 mm

Applications

- Resistance test, Self-propulsion test, Propeller open water test, Wake measurement, Local flow measurement, Streamline visualization
- Super-cavitating test for submerged body
- Maneuvering (Planar Motion Mechanism (HPMM) test, Free sailing test), Directional stability test
- Seakeeping (6-DOF Motion, Green water, Impact load, etc.) tests, Speed loss test in waves
- Water-jet propulsion, Azimuth thruster

Published description