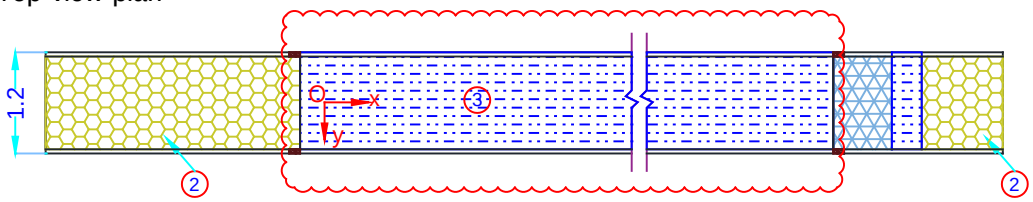
Name of organization Changwon National University	**Year of information updating** 2020
Year established 1969	**Year of joining the ITTC** -
Address 20 Changwondaehak-ro, Uichang-gu, Changwon-si, Gyeongsangnam-do, Korea	**Status in the ITTC** -
Contact details (phone, fax, e-mail) Changwon National University – +82 55 213 3680, +82 55 213 3689, cinter@changwon.ac.kr Ship Dynamics and Control Laboratory – +82 55 213 3683 hkyoon@changwon.ac.kr	**Website** http://www.changwon.ac.kr/name/main.do

Type of facility Two-dimensional Wave flume	**Year constructed / upgraded** Contructed 2011
Name of facility Ship Dynamics and Control Laboratory	**Location** (if different from the above address)

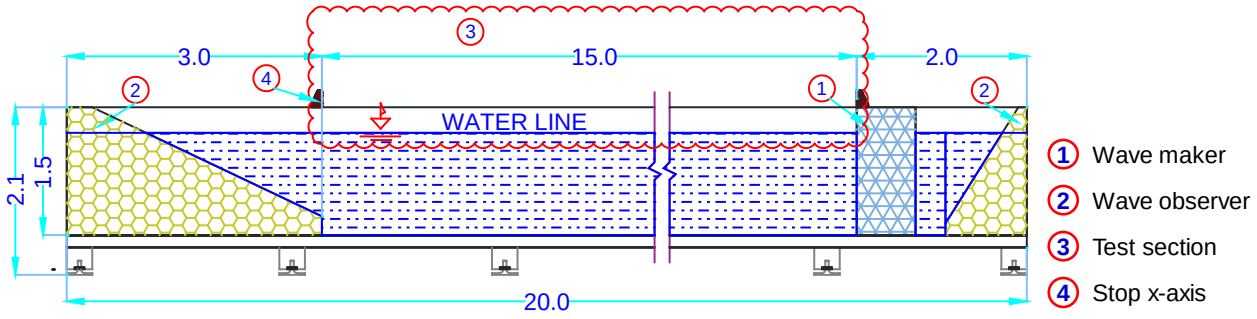
Main characteristics (dimensions of tank/basin/test section; for simulators: full mission, part task or desktop)
Towing tank (L x B x D) – 20 x 1.2 x 1.5 m

Drawings of facility

Top-view plan



Front-view plan



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

- Towing carriage
- Driven by AC servo motors (one for each wheel)
- Max. carriage speed: 1.0 m/s
- Wave generator
- Piston type and servo motor driven
- Wave height: $H \leq 0.2$ m
- Wavelength of regular wave: $\lambda \leq 3.0$ m
- Wave frequencies: $f \leq 2.0$ Hz

- Type of generated irregular waves: Neumann, Pierson-Moskowitz (PM), ISSC 1964, ISSC 1976, ITTC 1978, ITTC 1984, Bretschneider-Mitsuyasu (BM), JONSWAP, Ochi-Hubble, and User Defined Spectrum
- Other facility
- Front beach and behind beach for wave absorber (permeable panel type)
- Forced oscillating equipment roll (Approx. ± 25 degrees), heave (Approx. ± 0.1 m), sway (Approx. ± 0.1 m)
- Instrumentation
- Resistance dynamometers, propulsion dynamometers and rudder dynamometers
- Motion measurement devices (Inertial Measurement Unit (IMU), Motion Capture System (OptiTrack) and potentiometer)
- Tension gauge
- Max. model size: Ship length 1.5 m

Applications

- Model tests
  - Added mass and damping coefficients of 2D section of a ship in waves
  - Seakeeping test
  - Bollard pull test of submerged thruster
  - Electric generating performance test of wave energy converter
  - Wave absorbing test of various types of wave absorber
- Other tests
  - Measurement of wave run-up on semi-submersible's structure pillars

Published description (Publications on this facility)