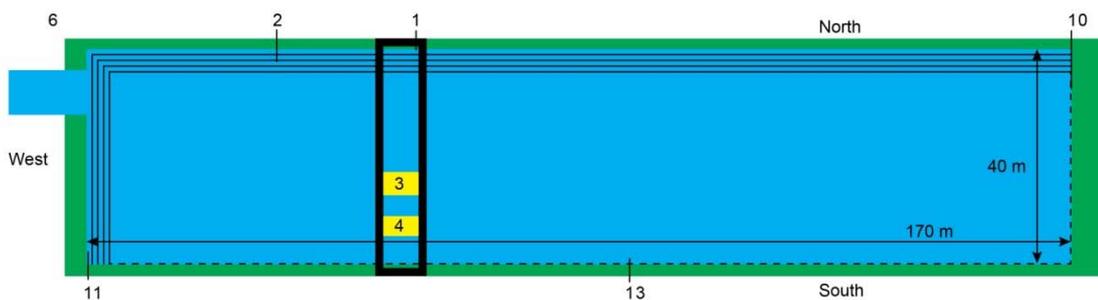
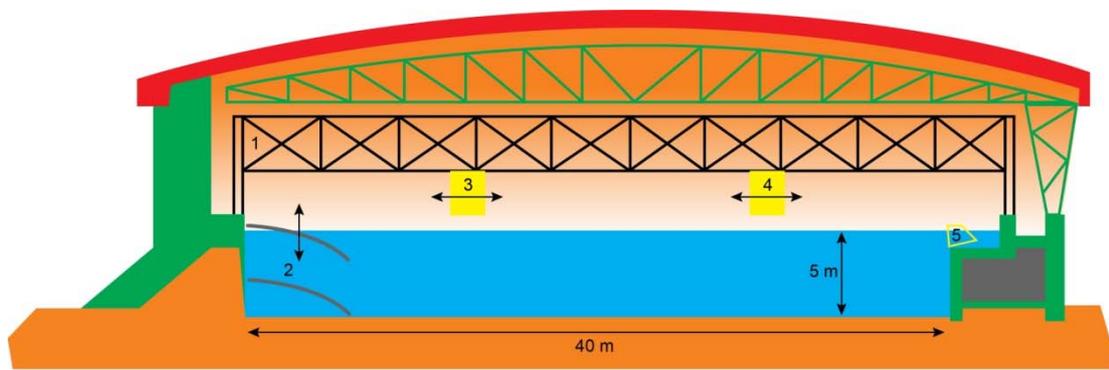


Name of organization MARIN	Year of information updating 2017
Year established 1932	Year of joining the ITTC 1932
Address Haagsteeg 2 6708 PM Wageningen The Netherlands	Status in the ITTC
Contact details (phone, fax, e-mail) +31 317 493 911 +31 317 493 235 info@marin.nl	Website www.marin.nl www.marin.eu
Type of facility Seakeeping basin	Year constructed/upgraded 2000 / 2017
Name of facility Seakeeping and manoeuvring basin (SMB)	Location (if different from the above address)

Main characteristics (dimensions of tank/basin/test section; for simulators: full mission, part task or desk top)
Length 170 m
Width 40 m
Water depth 5 m

Drawings of facility



- 1 Main carriage 6 m/s
- 2 Adjustable beach
- 3 Sub carriage 4 m/s
- 4 Visitor platform
- 5 Flap type wave maker
- 6 Preparation - harbour
- 7 62 * 60 cm Wave maker elements
- 8 Fixed beach
- 9 269 * 60 cm Wave maker elements

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

Description of carriage	Mainframe spanning the full width of the basin Subcarriage and visitor platform
Type of drive system and total power	Servo controlled, 8 * 45 kW
Maximum carriage speed	Main carriage 6 m/s Sub carriage 4 m/s Turn table 0.24 rad/s
Other capabilities	CPMC (computerized planar motion carriage)

Wave generator capability	Regular waves 0.90 m at a peak period of 2 s Irregular wave 0.45 m at a peak period of 2 s Wave direction 0 – 360 deg. Fitted with anti reflecting compensation (ARC)
Wave maker type:	Flap type wave generator along long side and sort side of the basin. 330 flaps of 0.6 m wide, hinge depth 1.6 m
Beach type and length	Short side: Circular beach, length 8 m, fixed Long side: circular beach, length 6 m, moveable, lowered in case of 0 or 180 deg wave direction
Other capabilities	Wind generation by portable wind fans
Instrumentation	Dynamometers for: <ul style="list-style-type: none"> - thrust and torque in propeller hub, - 6 component force balances, - thrusters - 4 component for rudder and fins Photo, video, underwater video, High speed cameras stroboscopes, Lighting for high speed camera observation Wave height transducers Pressure transducers wave loads and slamming loads Acceleration sensors
Model size range	0.3 - 12 m
Model tracking techniques	NDI camera (optical tracking)
Test performed	
Seakeeping	Seakeeping tests with measurements of motions, wave loads and added resistance of self propelled ships. Broaching and parametric roll High speed vessels (RIB, Life boats, Patrol boats) in extreme waves Dynamic tracking
Manoeuvring	Horizontal planar motion (CPMC) experiments Rotating arm experiments Manoeuvring test (zig-zag, pmm, stopping, turning circle)
Offshore	Test on moored and fixed object to determine motions, mooring forces and loads due to waves. Dynamic positioning tests Current load test Installation and sea transport of offshore structures Wave energy devices Drop tests for life boats
Other remarks	-
Published description (Publications on this facility)	
R.P. Dallinga, The New Seakeeping and Manoeuvring Basin of MARIN, Japanese workshop on waves, 1999	
H.H.A. Quadvlieg, A new combined Seakeeping and manoeuvring basin for the third millennium maritime research, MARSIM 2000.	
http://www.marin.nl/web/Facilities-Tools/Basins/Seakeeping-Manoeuvring-Basin.htm	