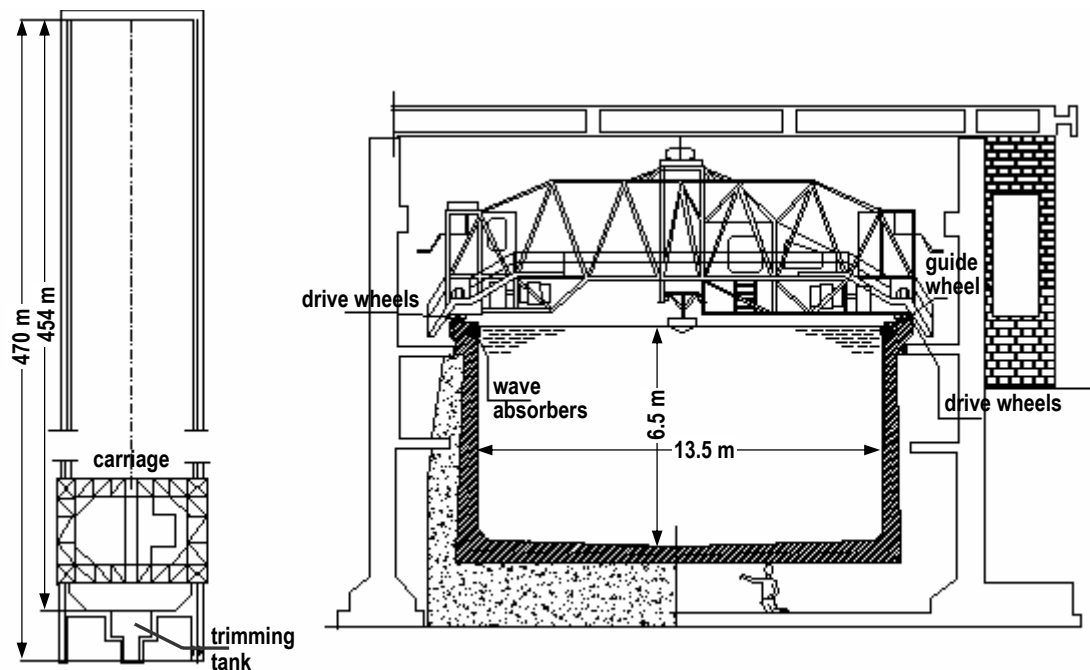


INTERNATIONAL TOWING TANK CONFERENCE CATALOGUE OF FACILITIES
TOWING TANKS, SEAKEEPING AND MANOEUVRING BASINS

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TOWING TANK NO. 1 (1974)



schematic plan view of basin

elevation view of basin and carriage

Description of tank: length = 470 m, breadth = 13.5 m, water depth = 6.5 m

Description of carriage: motor driven, manual control and automatic, manned

Drive system and power: Electric drive system with 4 pairs of drive wheels, each pair coupled to a DC main motor via a reduction gear. Electric main motors (92 kW × 4), electric secondary motors (5.5 kW × 2)

Maximum carriage speed: 15.0 m/s (accuracy 1 mm/s)

Other capabilities: the carriage supports the set up of the 6-component balance for submerged bodies or the vertical and horizontal Planar Motion Mechanism (PMM) for surface ships and submarines tests up to 5 m/s

Instrumentation: Force balance dynamometers; model propeller transmission dynamometers; Pitot tube rakes and five-hole Pitot tube for wake surveys; capacitive transducers for wave cut experiments. Special test rig for sailing yacht tests; 6-component balance and model propeller transmission dynamometers for manoeuvring tests (PMM), LDV 2-D measurement system

Model size range: 1.5m÷8.0 m

Tests performed:

- (1) resistance and self propulsion in calm water
- (2) 3-D wake surveys
- (3) vertical and horizontal planar motion experiments
- (4) resistance, self propulsion and hydrodynamic forces on submerged bodies
- (5) resistance, self propulsion tests at high speed on High Speed Marine Vehicles
- (6) upright, yawed and heeled sailing yacht tests
- (7) longitudinal wave cut experiments

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