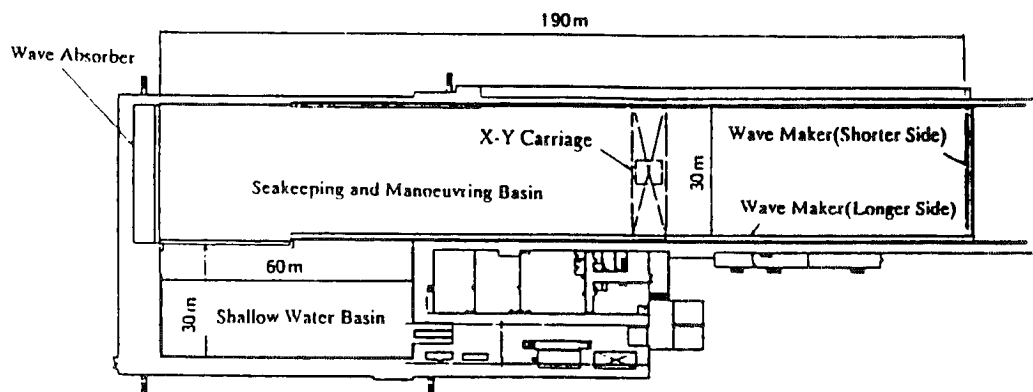


INTERNATIONAL TOWING TANK CONFERENCE CATALOGUE OF FACILITIES  
TOWING TANKS, SEAKEEPING AND MANOEUVRING BASINS

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JAPAN

SEAKEEPING AND MANOEUVRING BASIN (1972)



DESCRIPTION OF CARRIAGE: 1 manned, motor driven, digital control.  
TYPE OF DRIVE SYSTEM AND TOTAL POWER: Thyristor static Leonard system,  
double carriage (X-Y) type; X-carriage (22kw $\times$ 4),  
Y-carriage (2kw $\times$ 2).  
MAXIMUM CARRIAGE SPEED: 3 m/sec (X-carriage), 2 m/sec (Y-carriage).  
OTHER CAPABILITIES: horizontal PMM tests, CMT (Circular Motion Tester)  
tests with combined use of carriage control system and  
additional mechanism.

WAVE GENERATION CAPABILITY: regular, and irregular; period 0.5~2.5 sec,  
(length 0.5 ~ 10 m : deep water); max. wave height  
0.4 m.  
WAVE MAKER TYPE AND EXTENT: flap type\*, electro-hydraulic; 120 m (longer  
side), 30 m (shorter side). (\*without water on back-  
side)  
BEACH TYPE AND LENGTH: solid sloping beach with roughening bars; 5.2m(longer  
side: 125 m), 6.2 m (shorter side: 40 m).  
METHOD OF IRREGULAR WAVE GENERATION: irregular drive-signal input by mini-  
computer.  
WAVE MEASUREMENT: electric servo type or resistance type on Y-carriage

INSTRUMENTATION: mini-computer on Y-carriage for data acquisition and on-line  
analysis, analog telemetry system and sonar tracking  
system link to data acquisition system with 32ch.A/D converter for  
on-line data processing; data processing system with mini-computer.  
MODEL SIZE RANGE: from 3 to 7 m; (4.5~5 m as a standard size)  
MODEL TRACKING TECHNIQUE: ultra-sonic type model tracking system and automat-  
ic tracking by double carriage, relative position of model  
measured by optical probe.  
TEST PERFORMED: (1) seakeeping and propulsion tests at all headings in waves  
(2) restrained model tests in waves  
(3) forced oscillation tests for seakeeping characteristics  
(4) mooring tests  
(5) horizontal PMM, and CMT tests  
(6) free-running model tests for manoeuvrability and ship handling

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