

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

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<p>LARGE TOWING TANK (1943)</p>	
<p>The diagram illustrates the layout of the Nagasaki Experimental Tank. It consists of two main sections: a 'Large tank' and a 'Small tank'. The 'Large tank' is 165 m long and 12.5 m deep. The 'Small tank' is 120 m long and 6.1 m deep. The total length of the facility is 285 m. A 'Wave maker' is located at the left end of the large tank, and a 'Wave maker (movable)' is located at the right end of the small tank. The tanks are connected longitudinally.</p>	
<p>DESCRIPTION OF CARRIAGE: 1 manned, motor driven, digital control. TYPE OF DRIVE SYSTEM AND TOTAL POWER: Thyristor static Leonard system, 75 kw x 4. MAXIMUM CARRIAGE SPEED: 5 m/s. OTHER CAPABILITIES: maximum speed of 10 m/s can be achieved by using whole length of small and large towing tank connected longitudinally.</p>	
<p>WAVE GENERATION CAPABILITY: regular and irregular ; period 0.6 2.8 sec (length 0.5 ~ 12m), max. wave height 0.4 m. WAVEMAKER TYPE AND EXTENT: flap type, motor driven, 12.4 m wide. BEACH TYPE AND LENGTH: 4 rugged panels on circular arc, 5 m. WAVE MEASUREMENT: electric resistance type probes on carriage and tank walls.</p>	
<p>INSTRUMENTATION: minicomputer on carriage for data acquisition and on-line analysis. 32 analog and 6 digital channels, maximum sampling speed up to 100 kHz for analog channel. MODEL SIZE RANGE: ship length from 2 to 10 m (standard 7 m). max. propeller diameter 500 mm. MODEL TRACKING TECHNIQUES: propeller rpm adjusted automatically, relative model position measured by rotary encoder. TESTS PERFORMED: (1) resistance and self-propulsion tests in calm water and regular waves (2) wake survey tests (3) flow measurements around ship (4) wave pattern measurement (5) propeller open-water tests</p>	
<p>PUBLISHED DESCRIPTION: Journal of S.N.A. of Japan, Vol.96 (1955) Mitsubishi Juko Giho, Vol.14, No.1 (1977) Mitsubishi Juko Giho, Vol.20, No.1 (1985)</p>	