

JAPAN TOWING TANK CONFERENCE CATALOGUE OF FACILITIES & INSTRUMENTATIONS  
CIRCULATING WATER CHANNEL

DEPARTMENT OF NAVAL ARCHITECTURE COLLEGE OF ENGINEERING UNIVERSITY OF OSAKA PREFECTURE 4-804 MOZU-UMEMACHI, SAKAI, OSAKA 591 TEL. 0722 (52) 1161		JAPAN
CIRCULATING WATER TANK (1972)		
		<p>5 fixed guide vane 6 impeller 7 reduction V-belt 8 motor 9 man-hole 10 reserve tank 11 vacuum pump 12 filter 13 water pipe 14 working section 15 diffuser 16 contraction</p>
<p>DESCRIPTION OF FACILITY: horizontal channel, closed recirculating, open working section with free surface</p> <p>TYPE OF DRIVE SYSTEM: 4-bladed axial flow impeller with Thyristor-Leonard control</p> <p>MOTOR POWER: 37 KW, 2000 rpm</p> <p>DIMENSIONS OF WORKING SECTION: 6.55 m long, 1.50 m wide, 1.5 m deep, 1.0 m water depth</p> <p>WORKING SECTION MAXIMUM VELOCITY: 2.3 m/s</p>		
<p>INSTRUMENTATIONS: resistance dynamometer, propeller dynamometer, 5-hole and 3-hole pitot tube, hot-film velocity meter, various pressure sensors, lighting and photographing system</p> <p>MODEL SIZE RANGE: ship length 1.5 m - 2.3 m, 1.8 m typical</p> <p>TESTS PERFORMED: (1) flow visualizations (oil film, tracer, tuft etc.) (2) resistance, self-propulsion and open water propeller tests (3) velocity, local skin friction and pressure distribution in boundary layer (4) pressure distribution on hull and rudder with and without attack angle</p>		
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