Name of organization Technische Universität Berlin Naval Architecture & Ocean Engineering Chair of Dynamics of Maritime Systems	**Year of information updating** 2017
Year established 1879	**Year of joining the ITTC** 2013
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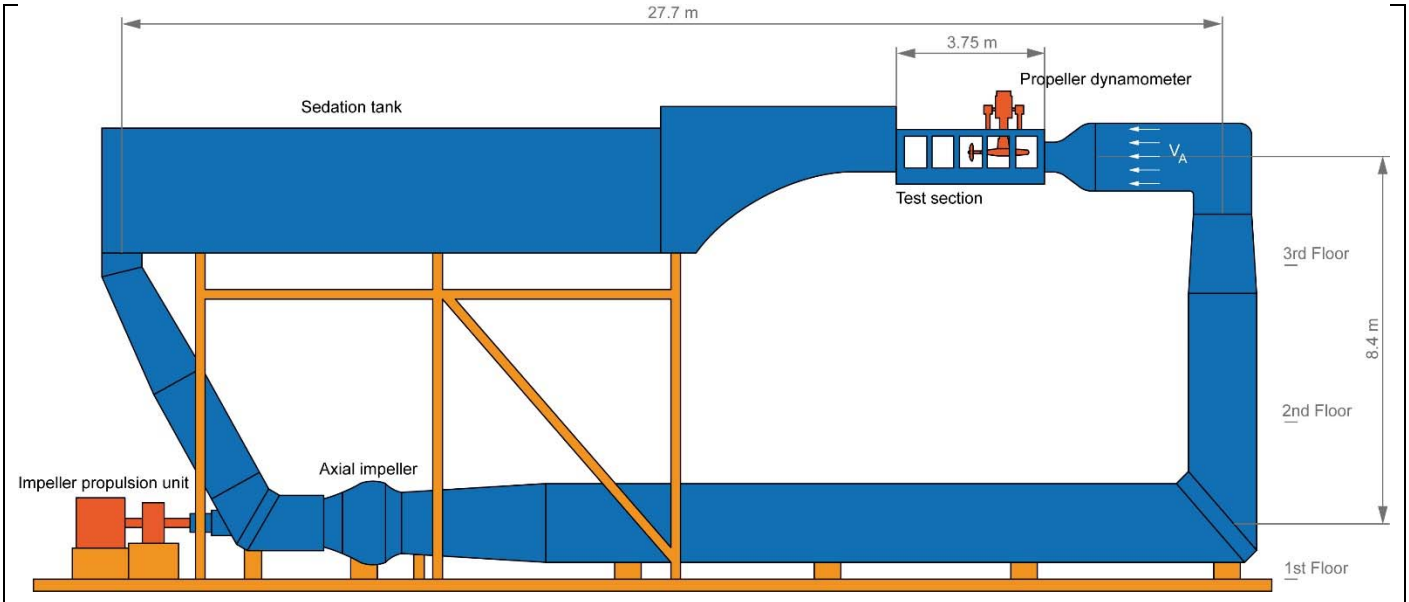
Type of facility Cavitation Tunnel	**Year constructed/upgraded** 1967 / 2010
Name of facility Circulating and Cavitation Tunnel K27	**Location** Salzufer 17-19, 10587 Berlin, Germany

Main characteristics

The Cavitation Tunnel can be operated with and without free surface. It has a large sedation tank and exchangeable test sections.

Built in 1967 by Kempf & Remmers

Drawings of facility



Detailed characteristics

Volume of water	260 m^3
Impeller motor	600 kW, 1800 rpm
Fixed pitch impeller	1.25 m diameter, 320 rpm
Exchangeable test section	

Small test section

Dimensions of cross section 0.6 m x 0.6 m
Length 3.75 m
Flow velocities up to v_{max} = 14 m/s
Minimum cavitation number σ_0 = 0.1
Floor panel of test section is adjustable in height
Can be used with or without free surface

Large test section

Dimensions of cross section 1.0 m x 0.7 m
Length 3.75 m
Flow velocities up to v_{max} = 8.5 m/s
Minimum cavitation number σ_0 = 0.3
Can be used with or without free surface

Measurement devices

Propeller dynamometer H34: T_{max} = 3600 N, Q_{max} = 180 Nm, n_{max} = 4000 rpm
An additional gauge enables the measurement of transverse propeller forces. The dynamometer is adjustable in height and inclination angles up to 25° are feasible. The model propeller can be investigated up- or downstream of the dynamometer.

Six component force balance for measuring flow forces on arbitrary bodies

Two component LDV for velocity measurements

Applications

Propeller open water tests, investigation of surface piercing propellers, cavitation tests with propellers and rudders, forces on hydrofoils under cavitation and ventilation, propeller tests in the wake field of dummy models

Published description