



Cavitation tunnel

SSPA has over 50 years of experience in cavitation testing. The cavitation tunnel consists of three interchangeable measuring sections allowing high speed testing of propellers up to 23 m/s as well as large ship models of up to 10 meters in section number three. When performing cavitation studies for ships, the complete ship models can be installed in SSPA's cavitation tunnel, which provides a very good representation of the wake field.

Since the cavitation tunnel is a very cost-effective facility, there are many possibilities for solving any problems that might occur. In addition to cavitation studies and erosion prediction, the tunnel is used to measure pressure pulses and radiated noise. Tests can be performed for all kinds of vessels, including merchant ships and fast naval ships, as well as submarines and other underwater vehicles. In addition to studying the ship propeller also energy saving devices, rudders, fins and PODs can be included in the scope.

The cavitation tunnel, with its three interchangeable sections, is also very valuable in various types of flow studies. Well correlated traditional methods are combined with high-speed video, PIV etc. Both in-house and external tools and programs are available to analyze the results.

The cavitation tunnel can also be used for studying and developing the latest green technologies such as ships equipped with an air cavity, air lubrication of ship hulls and tidal water turbines.

Technical data

Tunnel section	1	2	3
Length, metres	2.5	9.6	8.0
Test section, m ² diam 1 m	2.6 × 1.5	2.1 × 1.22	
Max speed, m/sec	23	6.9	9.9

Min cav number 0.06* 1.45** 0.30**

* Empty tunnel

** With the propeller in a position 0.2 m below the ceiling

