

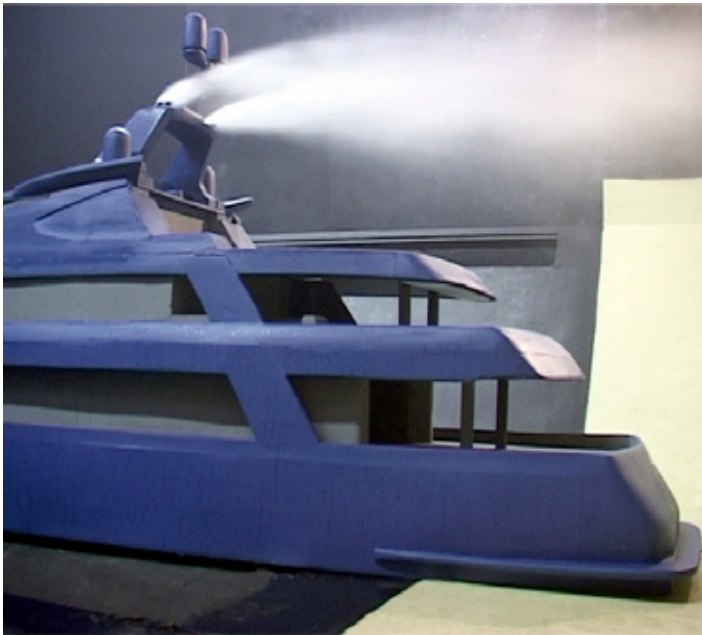
### Wind tunnel tests

The large wind tunnels at the University of Southampton are used for a wide range of tests on ship superstructures and fast craft. They may be used for flow visualization on towing tank hull models, as the dry environment facilitates visualization and modifications. The moving ground belts ensure accurate representation of the flow beneath planing hulls and hovercraft.

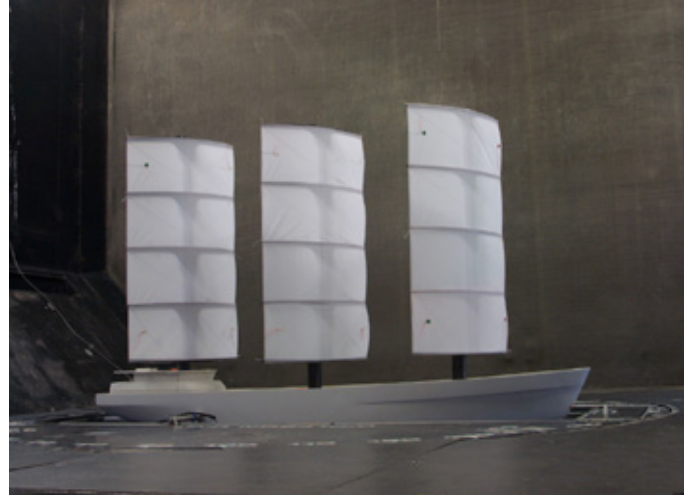
Traditional qualitative methods of flow visualization are now supplemented by Particle Image Velocimetry (PIV).

### Test programmes include

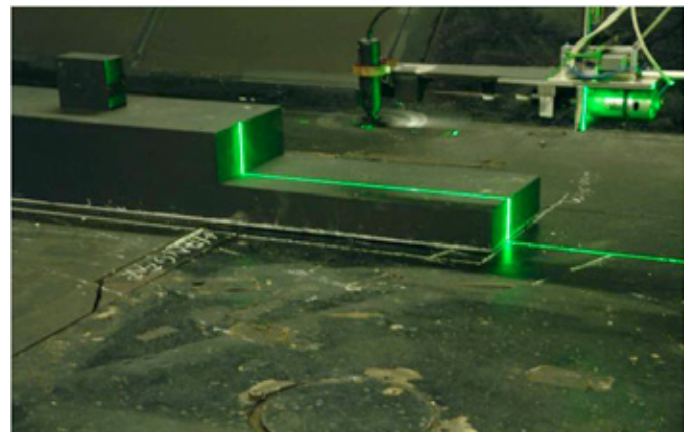
- Funnel design and determination of smoke plume trajectory
- Pollution of ventilation intakes by exhaust emissions
- Air flow across passenger and flight decks
- Roll forces in beam winds
- Wind resistance of superstructures
- Forces and passenger comfort on very high speed craft
- Hovercraft development.



Exhaust plume trajectory wind tunnel tests - Laurent Giles Naval Architects Ltd



Wind tunnel tests on a sail powered ship - B9



Particle Image Velocimetry of a ship helideck

