Air Pressure Testing of Pontoons or Fuel Tanks

Commercial Marine Services | **FACT SHEET**

This Fact Sheet provides a general description of the air pressure testing of pontoons or fuel tanks.

General

All compartments of a houseboat pontoon that are required for buoyancy purposes are to be air tested to a pressure of 3.5kPa or 357mm of water or 0.51psi.

All fuel tanks for a Commercial Vessel are to be tested to a pressure of 24.525kPa or 2.5m water or 3.6psi (20kPa or 2.04m water or 2.9psi if a Hire and Drive Houseboat).

The air pressure for the test may be measured by means of a Liquid Manometer or a Pressure Gauge.

When a pressure gauge is used, care must be taken to prevent the over pressuring of the compartment.

Pressure testing must be carried out prior to the application of a protective coating on the pontoons or in way of the welds.

Method of Air Test

Air is applied to the compartment or tank until the required test pressure is achieved. **The air is then shut off** and all welded seams, joints and connections are tested with soapy water to determine if there are any leaks and the positions of the leaks.

Where leaks do occur, the leak area is to be re-welded, and on completion, the air test repeated on the compartment effected. This operation is to be repeated if necessary until no further leaks from that compartment are observed.

Liquid Manometers

Liquid manometers may be constructed of a 12mm bore clear plastic tube mounted on a vertical sightboard.
For houseboat pontoons, the tube should be of sufficient length so that the air pressure can be raised to about 400mm of water and then reduced to about 360mm for the air test.

For fuel tanks, the tube should be of sufficient length so that the air pressure can be raised to about 3m of water and then reduced to about 2.5m for the air test.

The attached diagram shows a typical liquid manometer suitable for testing pontoon compartments or tanks.

When in use the sightboard is set up in the vertical position, half filled with water and one end connected to the pontoon or tank connection pipe and the other end left open to the atmosphere.

Application of air pressure on the one side causes the water level to rise in the other side of the tube. The pressure is then measured by taking the difference in height of the water levels in the “U” tube.

Pressure Gauge

The pressure gauge is connected to the pontoon or tank connection pipe and the air pressure applied until the required test pressure is recorded on the gauge.

The air supply valve is then closed and the pontoon or tank checked for leaks.

It is essential when using a pressure gauge to ensure that the gauge is correctly calibrated at all times.

An air pressure relief valve set at a percentage of the required pressure is to be fitted in the air supply pipe to the gauge.

For further information

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visit: www.dpti.sa.gov.au/marine/survey

Government of South Australia
Department of Planning, Transport and Infrastructure

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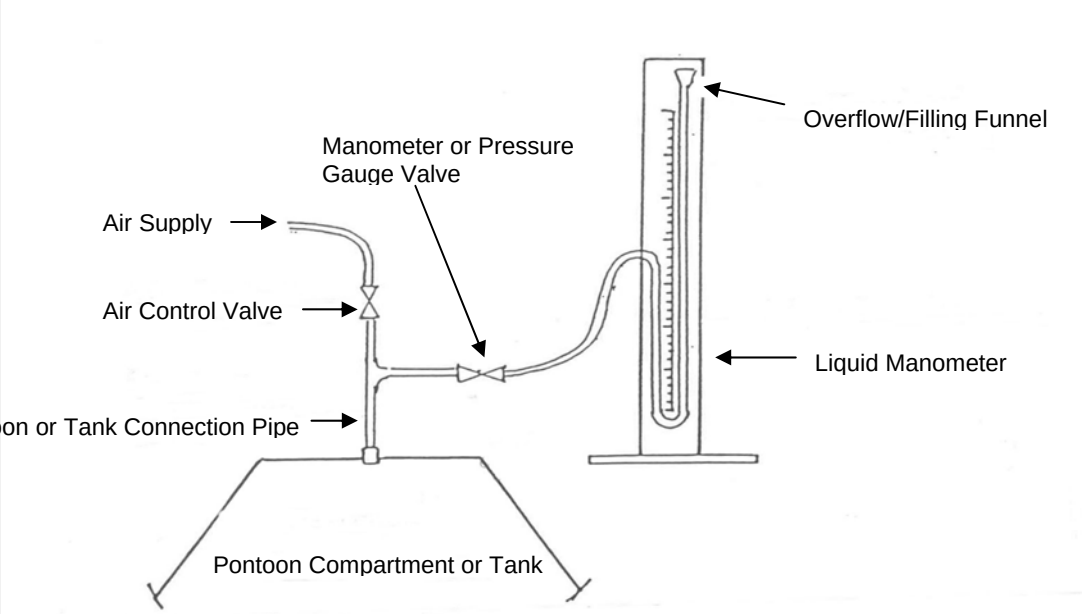

Further information

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