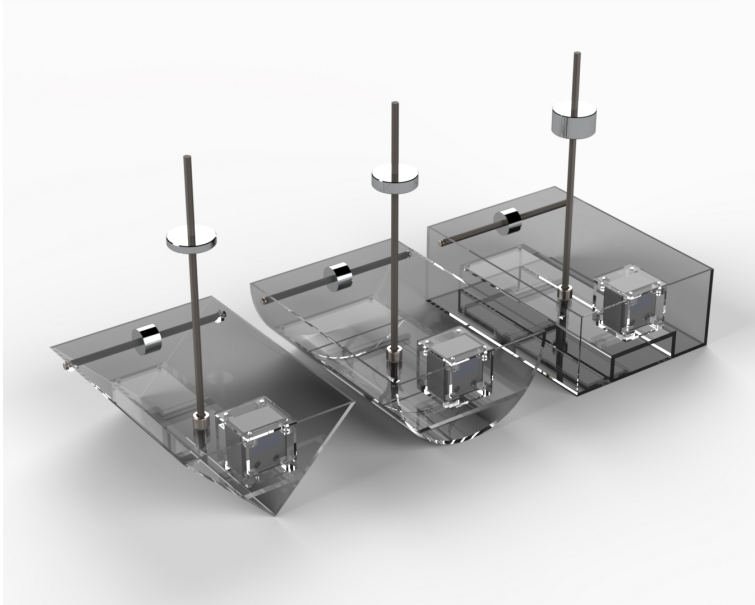


STABILITY OF FLOATING BODIES HB100E



1 study

Features

- Experiment provides 3 different hull designs
- Comes complete with set of calibrated weights

Description

The variety of floating bodies within this module allows the determination of the metacentre (A midway point between a ship's centre of buoyancy when upright and its centre of buoyancy when tilted). This standalone module contains 3 separate water tanks into which the 3 models supplied can be floated and tested individually but also simultaneously. The tanks and hulls are transparent to aid observation. The model boat hulls are supplied with a flat bottom, curved and triangular form. A central mast is supplied which supports a movable sliding weight. The central mast has a scale engraved on its surface to allow quick and accurate measurement of the weights position and adjustment of the centre of gravity. The angle of heel of each hull is read from an integral digital inclinometer. The horizontal jockey weight is mounted on a threaded shaft which equates one turn of the weight to one millimetre of movement. The weight is marked accordingly to allow ease of measurement. All three measurement devices therefore allow very accurate results to be obtained in a short time span.

Related Laws/Applications

- Morrish's Formula
- Archimedes Principle

Learning capabilities

- Determination of the metacentric height and the centre of buoyancy by analytical means.
- Calculating the righting moment for angles up to 10°
- Experimental determination of the metacentric height

Technical Specification

- Stainless steel and plastic components to avoid corrosion
- Integral digital inclinometer: +/- 0.1° increments. Fully water proof design.
- Individually tailored sliding weights for each hull design
- 3 Transparent water tanks capacity: 18 litres
- Horizontal balance weight range: 160mm
- Vertical balance weight range: 260mm
- Triangle model hull: 90° point angle
- Curved model hull: 200mm semi-circle

What's in the Box?

- 18L Water Tank
- Rectangular Hull
- Triangular Hull
- Semi-circular Hull
- Centre of gravity beam

Weights & Dimensions

- Triangular model hull: 280(L) x 200(W) x 100(H) mm, 2kg
- Curved model hull: 280(L) x 200mm semi-circle, 2kg
- Flat bottom model hull: 280(L) x 200(W) x 100(H) mm, 2kg
- Tank (x3): 480(L) x 390(W) x 200(H) mm, 2 kg

Essential Services

- Clean water source

Ordering information

To order this product, please call PA Hilton quoting the following code:
HB100E

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