

## **Trim and Squat**

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### **Abstract**

My Paper will show how a vessel in shallow conditions develops mean bodily sinkage and trim. Combined they give squat values. Which way a ship will trim depends upon the Block Co-efficient ( $C_b$ ), the Longitudinal Centre of Buoyancy (LCB) and the static trim.

If a ship, when static, is on even keel then:

For hull-forms having  $C_b > 0.700$ , they will trim by the Bow when underway.

For hull-forms having  $C_b < 0.700$ , they will trim by the Stern when underway.

For hull-forms having  $C_b$  of the order of 0.700, they will be no trim when underway.

Why this is so, I will explain in detail at the Conference.

If a ship, when static, is trimming by the Stern, then when underway, she will trim further by the Stern.

If a ship, when static, is trimming by the Bow, then when underway, she will trim further by the Bow.

Why this is so, I will explain in detail at the Conference.

In the explanations, I will give worked examples to illustrate the theory. I will then proceed to talk about negative squat and transverse squat for ships at forward speed in open water and in confined channels.

My Open Water conditions....(water depth)/(ship's mean draft) is  $H/T$  of 1.10 to 1.40.  
Confined Channel conditions.....Blockage Factor  $S$  ranging from 0.100 to 0.250.