

Homework 3

- A rectangular-block floater with $L=50$ m, $B=8$ m, $D=8$ m and $T=4$ m is studied for its stability performance where its VCG is 3 m above the baseline.
- To do:
 1. Plot the cross-curves of stability from $\phi = 0^\circ$ to $\phi = 90^\circ$ for every 10° in the range of $\nabla=400$ to 2800 m³ with no trim. (Fig. 5.3, p120)
 2. Construct the statical stability table for the displacement of the upright position @ $T_{CL}=4$ m with no trim from $\phi = 0^\circ$ to $\phi = 90^\circ$ for every 10° . (Table. 5.1, p121)
 3. Plot the statical-stability curve using the statical stability table and the initial GM. (Fig. 5.4, p121)
 4. Plot the dynamical-stability curve based on the statical stability curve. (Fig. 6.4, p136)
 5. A full derivation of the formulae to calculate the cross-curves of stability, the statical-stability curve and dynamical-stability curve must be given with the corresponding tables and figures. No Rhino or Orca3D output is allowed.

