

11/22/99 4:15 PM

Collision Model Test Matrix #4

Objective:

Current IMO Regulations non-dimensionalize damage extents with struck ship dimensions. This matrix will compare non-dimensional penetration (penetration/Beam of struck ship) for four different struck ships (DH60, DH150, DH283 and SH100) at a range of striking ship speeds. Consider only right angle collisions with zero speed for the struck ships so that *DAMAGE* results may be included. Compare results from all models. Info Books for the struck ships are on the Ad Hoc Panel #6 Web site.

Struck Ships: 60k dwt DH Tanker, $V_A = 0$ knt, $T = 13.5$ m, $\Delta = 83636$ MT; 150k dwt DH Tanker, $V_A = 0$ knt, $T = 16.8$ m, $\Delta = 178867$ MT; 283k dwt DH Tanker, $V_A = 0$ knt, $T = 16.8$ m, $\Delta = 178867$ MT; 100k dwt SH Tanker, $V_A = 0$ knt, $T = 13.35$ m, $\Delta = 111015$ MT.

Striking Ship: 150k dwt Bulk Carrier; $V_B = 2, 3, 4, 5, 6, 7$ knt; $T=15.96$ m, $\Delta = 174,850$ MT

Scenario: collision angle = 90 deg, strike location = center of COT 4P ($x_c=3.5$ m Fms, at web).

Runs: (4) x (6) = 24 each model

Plots: Penetration/B for each struck ship vs. V_B - 4 plots each model

Models: - *SIMCOL V 2.1*; *DAMAGE*; DTU; ALPS-SCOL

Observations:

Discussion:

Results: