

Model Test Specification

Hull	KCS
Test type	Captive (PMM)
Water depth	Deep
Appendages	Appended

TEST PROGRAM

Table 1: Scope of appended hull PMM tests in deep water, KCS

	Speed U/U_0 (non-dim.)	Prop. Revs. (non-dim.)	Rudder Angle δ (deg)	Drift Angle β (deg)	Heel Angle ϕ (deg)	Sway Vel. v' (non-dim)	Yaw Vel. r' (non-dim)
STATIC TESTS							
static rudder	1.00	1.00	$\pm 0, 10, 20, 30, 35$	0	0	-	-
	0.775	1.00	$\pm 0, 10^{(*)}, 20, 30, 35$	0	0	-	-
	0.60	1.00	$\pm 0, 10, 20, 30, 35$	0	0	-	-
	0.35	1.00	$\pm 0, 10, 20, 30, 35$	0	0	-	-
static drift	1.00	1.00	0	$\pm 0, 0.5, 1, 2, 4, 8$	0	-	-
	0.775	1.00	0	$\pm 0, 4, 8^{(*)}, 12$	0	-	-
	0.60	1.00	0	$\pm 0, 4, 8, 12, 16$	0	-	-
	0.35	1.00	0	$\pm 0, 4, 8, 12, 16, 20$	0	-	-
drift & rudder	0.775	1.00	$\pm 0, 10, 20, 30, 35$	± 4	0	-	-
	0.60	1.00	$\pm 0, 10, 20, 30, 35$	± 12	0	-	-
	0.35	1.00	$\pm 0, 10, 20, 30, 35$	± 20	0	-	-
static heel	1.00	1.00	0	0	4	-	-
	0.775	1.00	0	0	8	-	-
	0.60	1.00	0	0	12	-	-
heel & drift	0.775	1.00	0	-4, -8, -12	4	-	-
	0.775	1.00	0	4, 8, 12	-4	-	-
	0.60	1.00	0	-8, -12, -16	8	-	-

Table 2: Scope of appended hull PMM tests in deep water, KCS (cont.)

DYNAMIC TESTS							
pure sway	1.00	1.00	-	-	-	0.035	-
	0.775	1.00	-	-	-	0.07, 0.14, 0.21	-
pure yaw	1.00	1.00	-	-	-	-	0.05, 0.10, 0.15, 0.20
	0.775	1.00	-	-	-	-	0.40(*)
	0.60	1.00	-	-	-	-	0.60
	0.35	1.00	-	-	-	-	0.80
yaw & drift	0.775	1.00	-	± 8	-	-	0.40
	0.60	1.00	-	± 12	-	-	0.60
	0.35	1.00	-	± 20	-	-	0.80
yaw & rudder	0.775	1.00	± 10	-	-	-	0.40
	0.60	1.00	± 20	-	-	-	0.60
	0.35	1.00	± 30	-	-	-	0.80

Values highlighted in grey are base cases that were used for comparison with CFD for SIMMAN2008.

(*) Note: these tests shall be repeated N times to provide data for uncertainty analysis. N should be at least 3, but preferably 10.