

Model Test Specification

Hull	KVLCC2
Test type	Captive (CMT (+PMM))
Water depth	Deep
Appendages	Appended

TEST PROGRAM

(1) Resistance & Self Propulsion Test

HPR condition	Towing Speed: U (m/s)	Prop. Revolution: n (rps)	Yaw Rate: $r'=r(L/U)$ (non-dim.)	Drift Angle: β (degree)	Rudder Angle: δ (degree)
HR	0.600	N/A	0.0	0	0
	0.700				
	0.760				
	0.800				
HPR	0.600	MSPP	0.0	0	0
	0.700				
	0.760				
	0.800				

(2) Rudder Angle Test

HPR condition	Towing Speed: U (m/s)	Prop. Revolution: n (rps)	Yaw Rate: $r'=r(L/U)$ (non-dim.)	Drift Angle: β (degree)	Rudder Angle: δ (degree)
HR	0.760	N/A	0.0	0	-20, -15, -10, -5, 0, 5, 10, 15, 20
HPR	0.760	Under Load	0.0	0	-20, -15, -10, -5, 0, 5, 10, 15, 20
		MSPP			-35, -30, -25, -20, -15, -10, -5, 0, 5, 10, 15, 20, 25, 30
		Over Load			-20, -15, -10, -5, 0, 5, 10, 15, 20

(3) Circular Motion Test

HPR condition	Towing Speed: U (m/s)	Prop. Revolution: n (rps)	Yaw Rate: $r'=r(L/U)$ (non-dim.)	Drift Angle: β (degree)	Rudder Angle: δ (degree)
H	0.760	N/A	0.0	-16,-8,-4, 0,4,8,16	0
			-0.8, -0.4 0.4, 0.8	0	0
HR	0.760	N/A	0.0	-16,-8,-4, 0,4,8,16	0
			-0.8, -0.4 0.4, 0.8	0	0
HPR	0.760	MSPP	-0.8	0	0, 12
				-12, 8	0
			-0.6	0	-30, -20, -10, 0, 10, 20
				-12, 12	0
			-0.4	0	-8, 0
			-0.2	0	-4, 0
				-12, 12	0
			-0.1	0	-4, 0
			0	-20	-10, 0
				-16	-25, -15, -8, 0, 8, 15, 25
				-12	-8, 0
				-8	-20, -10, -5, 0, 10, 20
				-4	-4, 0
				-6, -2, 0, 2, 6	0
				4	0, 4
				8	-20, -15, -10, 0, 5, 10, 20
				12	0, 8
				16	-20, -15, -10, 0, 5, 10, 20
				20	0, 10
				0.1	0
			0.2	0	0, 4
				-12, 0, 2, 4, 6, 8, 12, 16,	0
			0.4	0	0, 6
			0.6	0	-20, -10, 0, 8, 15, 25
				-12, 2, 4, 6, 8, 12, 16	0
			0.8	0	0, 12
				-12, 2, 4, 6, 8, 12, 16	0

(4) PMM Test

HPR condition	Towing Speed: U (m/s)	Prop. Revolution: n (rps)	Mode	Period: T (sec)	Oblique Amplitude: β_a (degree)	Yaw Rate Amplitude $r_a' = r_a(L/U)$	Rudder Angle: δ (degree)
H	0.760	N/A	Pure Sway	12.0	8	0.0	0
				6.0	16	0.0	0
			Pure Yaw	12.0	0	0.4	0
				6.0	0	0.4	0
			Combined	12.0	8	0.4	0
				6.0	4	0.4	0
HR	0.760	N/A	Pure Sway	12.0	8	0.0	0
				6.0	16	0.0	0
			Pure Yaw	12.0	0	0.4	0
				6.0	0	0.4	0
			Combined	12.0	8	0.4	0
				6.0	4	0.4	0
HPR	0.760	MSPP	Pure Sway	12.0	8	0.0	0
				6.0	16	0.0	0
			Pure Yaw	12.0	0	0.4	0
				6.0	0	0.4	0
			Combined	12.0	8	0.4	0
				6.0	4	0.4	0
HPR	0.760	MSPP	Pure Sway	12.0	8	0.0	0
				6.0	16	0.0	0
			Pure Yaw	12.0	0	0.4	0
				6.0	0	0.4	0
			Combined	12.0	8	0.4	0
				6.0	4	0.4	0