

Table for Trim, List & GM · Fully Loaded, Departure Condition (Trim, List and Stability Sheet - Metric Units)						Vessel: LCT. SURYA AGUNG 2			Prepared by: CALIFILARD	
						Client: PT. KANAYA & IST CONSORTIUM			1/3/2019 6:45	

Item	Description	W, Tonne	vcg, m	mv	lcg, m	ml	tcg, m	mt	Comments
1	Original Light Ship, based on info provided	300.000	0.500	150.000	24.500	7350.000	0.000	0.000	See inputs Sheet 1, LCT Inputs
2		0.000	0.000	0.00	0.000	0.00	0.000	0.00	
3	Crane with Boom	80.000	2.750	220.00	7.500	600.00	1.50	120.00	See inputs Sheet 2, Crane Inputs
4	Hook Load	7.500	21.400	160.50	21.000	157.50	10.00	75.00	See inputs Sheet 2, Crane Inputs
5	Compensating Weight for Leveling LCT	0.000	10.400	0.00	0.000	0.00	0.00	0.00	See inputs Sheet 2, Crane Inputs
6		0.000	0.000	0.00	0.000	0.00	0.000	0.00	
7	Deck Cargo	88.000	2.500	220.00	20.000	1760.00	0.000	0.00	See inputs Sheet 1, Dck Cargo Inputs
8		0.000	0.000	0.00	0.000	0.00	0.000	0.00	
9		0.000	0.000	0.00	0.000	0.00	0.000	0.00	
10	Margin	0.000	0.000	0.00	0.000	0.00	0.00	0.00	
Totals for Items other than Tanks		475.50	1.578	750.50	20.752	9867.50	0.410	195.00	

Tankage Conditions

Tank Item	Liquid	% Full	Transverse Net Inertia of Tank Free Surface, m ⁴ , I _t	Weight Density, Cubic Meters per Tonne, γ	Transverse Free Surface Factor, Tonne · m, where FSF = I _t / γ	Tank Identification	W _{max} Tonne	w Tonne	vcg m	mv Tonne·m	lcg m	ml Tonne·m	tcg m	mt Tonne·m	Location	Comments
1	Fresh Water	30%	0.0000	1.000	0.000	9.00	9.000	2.700	0.250	0.68	5.000	13.50	0.000	0.00	-	-
2	Diesel Fuel	25%	0.0000	1.156	0.000	10.00	10.000	2.500	0.250	0.63	7.500	18.75	0.000	0.00	-	-
3								0.000		0.00		0.00		0.00		
4								0.000		0.00		0.00		0.00		
Totals for Tanks								5.200		1.30		32.25		0.00		

$FSF_t = 0.000$ $W_t = 480.700$ $MV_t = 751.80$ $ML_t = 9899.75$ $MT_t = 195.00$

W_t (Tonne) = 480.700 FSC_t (LT·ft) = $FSF_t / W_t = 0.000$ VCG_t (meters) = 1.564 LCG_t (meters) = 20.594 TCG_t (meters) = 0.406

Notes: Moment arm sign convention as follows: Plus values are aft of amidships, to stbd. & above Base Line.

Inputs from Independent Calculations or by Curves of Form Data
 T = 0.958 Draft at LCF in meters, corresponding to above W_t (displacement)
 LCB = 25.5000 Longitudinal Center of Buoyancy, m aft from Amidships, for W_t
 LCF = 27.0000 Longitudinal Center of Floatation, m aft from Amidships, for W_t
 $KM_T = 10.073$ Transverse Metacenter to Base Line, meters, for W_t
 $KM_L = 209.41$ Longitudinal Metacenter to Base Line, meters, for W_t

Stability Calcs.
 LBP = 49.0 Length Between Perpendiculars, m
 Virtual KG (m) = $VCG_t + FSC_t = 1.564$
 GM_T available (meters) = $KM_T - \text{Virtual KG} = 8.509$
 Max Allowable KG (meters), if unknown set to zero = 1.650
 Margin (meters) = max. KG allowed - KG virtual = 0.086

Trim Calcs. $MTF = 2038.99$ Moment Trim One Meter, $(KM_L - VCG_t) \cdot W_t / (LBP)$, m·Tonne/m $T_f = [T - (TRIM) \cdot (1/2 + LCF/LBP)] = 2.173$ CL Keel Draft Forward, meters
 Trim by the stern is defined as positive. $a = -4.906$ Trim Lever, $LCG - LCB$, meters $T_a = [T_f + TRIM] = 1.017$ CL Keel Draft Aft, meters
 $TRIM = -1.157$ Trim, $a \cdot W_t / MTF$, meters Trim Angle, deg. = $\tan^{-1}(Trim/LBP) = -1.352$ $T_m = (1/2)(T_f + T_a) = 1.595$ CL Keel Draft Amidships, meters

B = 10.50	LIST = $B \cdot TCG / GM_T = 0.50$	Fwd Corner Drafts	$T_{FP} = T_f - LIST/2 = 1.92287$	Aft Corner Drafts	$T_{AP} = T_a - LIST/2 = 0.76637$
LIST angle degrees, $\phi = \arctan(LIST/B) \cdot (180/\pi) = 2.73$			$T_{FS} = T_f + LIST/2 = 2.42348$		$T_{AS} = T_a + LIST/2 = 1.26697$