

# LAMPIRAN VIII: STABILITY AND TRIM CALCULATION



## PT MERATUS TONGKANG SERVICE STABILITY AND TRIM CALCULATION MV. MARINA STAR 3

Voyage : 84/JKT - AMA/2015

Arrival Port : Amamapare

Arrival Date / Time : 13/12/2015 / 18.12

ITEM	Weight	V.Moment	L. Moment	Fs Corr
	(M.Ton)	(M.Ton)	(M.Ton)	
Cargo Total	7415.91	62726.23	572740.21	2192.69
Water Ballast	485.00	499.62	39261.60	
Fresh Water	160.00	638.40	5038.40	
Fuel Oil	370.00	505.30	30079.10	
Diesel Oil	113.97	62.90	4028.89	
Lub Oil	25.00	77.625	237.50	
Light Ship	5473.78	49701.92	326292.03	
Constant & Others	400.00	4896.00	28000.00	
Displacement	14443.66	119107.99	1005677.73	

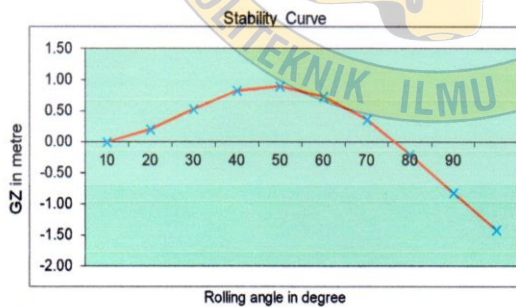
Heel Angle	STATICAL STABILITY			
	Sin Q	M S	G o M Sin Q	G Z
0	0	0	0	0
10	0.174	1.640	1.435	0.205
20	0.342	3.350	2.820	0.530
30	0.500	4.950	4.123	0.827
40	0.643	6.200	5.302	0.898
50	0.766	7.050	6.317	0.733
60	0.866	7.500	7.141	0.359
70	0.939	7.550	7.752	-0.202
80	0.984	7.300	8.123	-0.823
90	1.000	6.830	8.246	-1.416

D - Mean	6.40	Mtrs	Actual
Trim	0.75	Mtrs	Draft
D - Fwd	6.03	Mtrs	
D - Aft	6.77	Mtrs	
Trim by Stern			
Draft Max 8.102			

Maximum GZ	0.90	Mtrs
Angle of Max GZ	40	Degs
Angle of Vanishing GZ	70	Degs

GoM	0.82	Mtrs
Rolling Period	17.16	Sec
Propeller Immersion	74.96	%

Good GoM	
CRITERIA STABILITY (IMO A.167)	ACTUALITY
* Area 30° (≥ 0.055 m-rad)	0.198 <b>OK</b>
* Area 40° (≥ 0.09 m-rad)	0.354 <b>OK</b>
* Area 30°-40° (≥ 0.03 m-rad)	0.155 <b>OK</b>
* GZ at 30° (≥ 0.20 m)	0.827 <b>OK</b>
* Angle of max GZ ≥ 25°	40 <b>OK</b>
* Initial GM ≥ 0.15 m	0.82 <b>OK</b>
* Mean Draft ≤ 8.083 (S)	6.40 <b>OK</b>



Prepared by :

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Approved by

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Master