

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

 Index. No. _____
 (For London Office only).

Ship's Name Steel T.S. M. V. "EL BUARO"	Official Number -	Nationality and Port of Registry Guayaquil, Ecuador	Gross Tonnage 259.46	Date of Build 1927	Port of Survey Balboa, Canal Zone
Moulded Dimensions: Length 116.5' Breadth 23.00' Depth 11.00'					Date of Survey 27th April, 1951
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature G. H. Haman
Coefficient of fineness for use with Tables .68					Particulars of Classification #100A1
					Carrying Petroleum in bulk.

Depth for Freeboard (D). Moulded depth ... 11.00 Stringer plate30 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 11.025	Depth correction. (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(11.05 - 7.77) .896 = +2.94$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ If restricted by superstructures <input checked="" type="checkbox"/>	Round of Beam correction. Moulded Breadth (B) 23.0 Standard Round of Beam = $\frac{B \times 12}{50} = 5.52$ Ship's Round of Beam = 6. Difference .08 Restricted to Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.08}{4} \times 2887 = -.01$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure 6.0'
" overhang ...						" R.Q.D. 3.10'
R.Q.D. enclosed ...	35.89	36.33	44"	<input checked="" type="checkbox"/>	36.33	Deduction for complete superstructure 17.65"
" overhang ...	36.33					Percentage covered $\frac{S}{L} = 58.48$
Bridge enclosed ...						" $\frac{S_1}{L} = 71.13$
" overhang aft ...						" $\frac{E}{L} = 55.62$
" overhang forward ...	31.80	31.80	44"	3.67/6.00	19.45	Percentage from Table, Line A. 39.87
F'cle enclosed ...	32.00					(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B. <input checked="" type="checkbox"/>
Trunk aft 48.38						(corrected for absence of forecastle (if required))
" forward ... 7.23	48.66	14.73	44"	3.67/6.00	9.01	Interpolation for bridge less than 2L (if required) <input checked="" type="checkbox"/>
Tonnage opening aft ...						Deduction = 17.65 × 39.87 = 7.04
" forward ...						
Total ...	68.13	82.86			64.79	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	21.65	1		21.65	14.62	14.62	1		14.62	Mean actual sheer aft = Mean standard sheer aft =
$\frac{1}{4}$ L from A.P. ...	9.63	4		38.52	6.02	6.02	4		24.08	
$\frac{2}{4}$ L " ...	2.38	2		4.76	1.50	1.50	2		3.00	Mean actual sheer forward = Mean standard sheer forward =
Amidships ...		4					4			
$\frac{2}{4}$ L from F.P. ...	4.76	2		9.52	4.46	4.46	2		8.92	Length of enclosed superstructure forward of amidships = L
$\frac{1}{4}$ L " ...	19.27	4		77.08	17.87	17.87	4		71.48	
F.P. ...	43.30	1		43.30	38.37	38.37	1		38.37	aft of " =
Total ...				194.83					160.47	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{34.36}{18} (.75 - .2924) = +.87$

If limited on account of midship superstructure. If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 11.05 Summer freeboard = .50 Moulded draught (d) = 10.55 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 264.2 Addition for Winter North Atlantic Freeboard (if required) =	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40T}$ inches = 2 1/2"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient NIL. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td>2.94</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Deduction for superstructures ...</td> <td>7.04</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Sheer correction ...</td> <td>.87</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Round of Beam correction ...</td> <td>.01</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td></td> <td></td> </tr> <tr> <td>3.81</td> <td>7.05</td> <td>-3.24</td> </tr> <tr> <td colspan="3">Summer Freeboard = 8.41</td> </tr> </table>		+	-	Depth Correction ...	2.94	<input checked="" type="checkbox"/>	Deduction for superstructures ...	7.04	<input checked="" type="checkbox"/>	Sheer correction87	<input checked="" type="checkbox"/>	Round of Beam correction01	<input checked="" type="checkbox"/>	Correction for Thickness of Deck amidships ...			Other corrections, scantlings, etc. ...			3.81	7.05	-3.24	Summer Freeboard = 8.41		
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—

1406 FREEBOARDS REASSIGNED Tropical Fresh Water Line above Centre of Disc ... 4 1/2" Fresh Water Line " " ... 2 1/2" Tropical Line " " ... 2" Winter Line below " " ... 1 1/2" Winter North Atlantic Line " " ... NOT ASSIGNED	Tropical Fresh Water Freeboard ... 0' 6" Fresh Water " " ... 0' 1 1/2" Tropical " " ... 0' 3 1/2" Winter " " ... 0' 4" Winter " " ... 0' 7 1/2" Winter North Atlantic " " ... NOT ASSIGNED
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