

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name RIA DEEL FERROL	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 80.00m Breadth 12.49m Depth 5.89m					Date of Survey 9.6.47.
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables .74 (ASSUMED)					Particulars of Classification

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 5.890	(a) Where D is greater than Table depth (D—Table depth) R = 8.33(5.897 - 5.333) 2020 = + 95 m/m	Moulded Breadth (B) = 12.49
Stringer plate ... 7	(b) Where D is less than Table depth (if allowed) (Table depth—D) R = 564	Standard Round of Beam = $\frac{B \times 12}{50} = 250 \text{ m/m}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 250 m/m
Depth for Freeboard (D) = 5.897		Difference = NIL
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right) = \text{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	5.70	5.70	2.26	✓	5.70
" overhang ...					
R.Q.D. enclosed ...	21.90	21.90	1.22	1.271	21.02
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	52.40	52.40	2.26	✓	52.40
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	80.00	80.00			79.12

Standard Height of Superstructure **1.868 m**

" " R.Q.D. **1.271 m**

Deduction for complete superstructure **820 m/m**

Percentage covered $\frac{S}{L} =$ **100**

" " $\frac{S_1}{L} =$ **100**

" " $\frac{E}{L} =$ **98.90**

Percentage from Table, Line A. **98.65**

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **✓**

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = **9865 × 820 = 809 m/m**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	9210	1		921	1260	1260	1		1260
$\frac{1}{4}$ L from A.P. ...	409	4		1636	300	300	4		1200
$\frac{2}{4}$ L " ...	102	2		204	-10	-10	2		-20
Amidships ...	0	4		-	0	0	4		-
$\frac{3}{4}$ L from F.P. ...	204	2		408	440	440	2		880
$\frac{1}{4}$ L " ...	818	4		3272	1240	1240	4		4960
F.P. ...	1841	1		1841	2320	2320	1		2320
Total ...				8282					10600

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{2318}{18} \times .25 = -32 \text{ m/m}$

If limited on account of midship superstructure. **✓**

Mean actual sheer aft = **DEFICIENT = 86.8%**

Mean standard sheer aft

Mean actual sheer forward = **EXCESS**

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = **> .1**

" " aft of " = **> .1**

SHEER AFT

STANDARD	ACTUAL
921	1260
409	300
102	-10
0	0
204	440
818	1240
1841	2320
2454	2130

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 = 5.897 Summer freeboard = 180 Moulded draught (d) = 5.717 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 119 Addition for Winter North Atlantic Freeboard (if required) = 180	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 = $\frac{\Delta}{40 T}$ inches = 119	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient = $\frac{.68 + .74}{1.36} = \frac{1.42}{1.36}$ <table border="1"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction</td> <td>95</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures</td> <td>-</td> <td>809</td> </tr> <tr> <td>Sheer correction</td> <td>-</td> <td>32</td> </tr> <tr> <td>Round of Beam correction</td> <td>-</td> <td>-</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></td> <td>95</td> <td>841</td> </tr> </tbody> </table> Summer Freeboard = 180		+	-	Depth Correction	95	-	Deduction for superstructures	-	809	Sheer correction	-	32	Round of Beam correction	-	-	Correction for Thickness of Deck amidships	-	-	Other corrections, scantlings, etc.	-	-		95	841
	+	-																								
Depth Correction	95	-																								
Deduction for superstructures	-	809																								
Sheer correction	-	32																								
Round of Beam correction	-	-																								
Correction for Thickness of Deck amidships	-	-																								
Other corrections, scantlings, etc.	-	-																								
	95	841																								

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	238
Fresh Water Line	119
Tropical Line	119
Winter Line below	119
Winter North Atlantic Line	170

Tropical Fresh Water Freeboard	58
Fresh Water	64
Tropical	61
Winter	299
Winter North Atlantic	180