

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

13067

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "DIANA"	Official Number 302	Nationality and Port of Registry Italian Venice	Gross Tonnage 5347	Date of Build 1923	Port of Survey Trieste
Moulded Dimensions: Length 90.00 Breadth 13.50 Depth 6.60					Date of Survey Aug 1947
Moulded displacement at moulded draught = 85 per cent. of moulded depth 4965 m³ tons					Surveyor's Signature <i>Leombicelli</i>
Coefficient of fineness for use with Tables .789					Particulars of Classification 100 A1 with freeboard (Class contemplated)

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 6.60	(a) Where D is greater than Table depth (D-Table depth) R = $8.33 \frac{(6.609 - 6.0)}{3.96} = 115.3 + 115$	Moulded Breadth (B) 13.50 m
Stringer plate 009	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 5.22	Standard Round of Beam = $\frac{B \times 15}{50} = 270 \%$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 280 %
Depth for Freeboard (D) = 6.609		Difference = 10 m/m
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{10}{4} \times .0087 = .022 \text{ m/m NIL.}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed			2400		
" overhang aft					
" overhang forward					
F'cle enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	90.000	89.215			89.215

Standard Height of Superstructure **1969** ✓
" " R.Q.D. **890 m/m** ✓
Deduction for complete superstructure **880.4** ✓
Percentage covered $\frac{S}{L} = 100$ ✓
" " $\frac{S_1}{L} = 99.13$ ✓
" " $\frac{E}{L} = 99.13$ ✓
Percentage from Table, Line A. + B **98.93** ✓
(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 = **880.4** - **880 m/m**

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P.	1004	1	1004	1060	1491	1	1491
1/2 L from A.P.	440	4	1784	460	663	4	2652
1/4 L "	112	2	224	120	164	2	328
Amidships	-	4	-	-	-	4	-
3/4 L from F.P.	223	2	446	240	281	2	562
1/2 L "	892	4	3568	920	1135	4	4540
F.P.	2007	1	2007	2120	2551	1	2551
Total			9039				18124

Mean actual sheer aft = **1491**
Mean standard sheer aft = **1491**
Mean actual sheer forward = **1135**
Mean standard sheer forward = **1135**
Length of enclosed superstructure forward of amidships = **2400**
" " aft of " = **1469**
" " " = **431**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{3091}{18} \times .75 = 43$
If limited on account of midship superstructure. **43** ✓
If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 6.609 Ft. Summer freeboard = 306 Moulded draught (d) = 6.303 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48} \text{ inches} = 131.3$ Addition for Winter North Atlantic Freeboard (if required) = 181	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 5850$ metric tons Tons per inch immersion at summer load water line $T = 10.2$ metric tons per inch Deduction = $\frac{\Delta}{40 T} \text{ inches} = 141$	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.729 + .65}{1.36} = 1.409$ <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td></td><td>+</td><td>-</td></tr> <tr><td>Depth Correction</td><td>115</td><td></td></tr> <tr><td>Deduction for superstructures</td><td></td><td>880</td></tr> <tr><td>Sheer correction</td><td></td><td>43</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>115</td><td>923</td></tr> </table> Summer Freeboard = 306		+	-	Depth Correction	115		Deduction for superstructures		880	Sheer correction		43	Round of Beam correction			Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.				115	923
	+	-																								
Depth Correction	115																									
Deduction for superstructures		880																								
Sheer correction		43																								
Round of Beam correction																										
Correction for Thickness of Deck amidships																										
Other corrections, scantlings, etc.																										
	115	923																								

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

Tropical Fresh Water Line above Centre of Disc	Tropical Fresh Water Freeboard
Fresh Water Line " "	Fresh Water " "
Tropical Line " "	Tropical " "
Winter Line below " "	Winter " "
Winter North Atlantic Line " "	Winter North Atlantic " "

