

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name ORESUNDVARVET. 126.	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 153.01M. Breadth 20.041. Depth 11.557					Date of Survey 13.6.51.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 23600 tons					Surveyor's Signature <i>[Signature]</i>
Coefficient of fineness for use with Tables .776.					Particulars of Classification 100A1. C.P.B.

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 11.557.	(a) Where D is greater than Table depth (D-Table depth) R = 8.33(11.578-10.200)30 = + 344 m/m.	Moulded Breadth (B) 20.041.
Stringer plate 21.	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 1.378.	Standard Round of Beam = $\frac{B}{50} = \frac{20.041}{50} = 401.$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	If restricted by superstructures	Ship's Round of Beam = 400.
Depth for Freeboard (D) = 11.578.		Difference = 1.
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1}{4} \times 5733 = 141.$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>Equip.</i> ...	33.365.	33.365	2.360	✓	33.365
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed <i>Equip.</i> ...	11.505	11.505	2.360.	✓	11.505.
" overhang aft <i>Equip.</i> ...	1.095	822			822.
" overhang forward ...					
F'cle enclosed	19.170.	19.170.	2.285.	✓	19.170.
" overhang850	.425	Say STANDARD.		.425.
Trunk aft					
" forward					
Tonnage opening aft ...					
" " forward ...					
Total	65.985	65.287.			65.287.

Standard Height of Superstructure	2.290M.
" " R.Q.D.	✓
Deduction for complete superstructure	1067 m/m.
Percentage covered $\frac{S}{L} =$	43.15.
" " $\frac{S_1}{L} =$	42.67.
" " $\frac{E}{L} =$	42.67.
Percentage from Table, TANKER. 33.67.	
(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 = 1067 x 3367 = -359 m/m.	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	1529.	1	1529.	1150.	1150	1	1150.
$\frac{1}{2}$ L from A.P. ...	679.	4	2716.	200.	200.	4	800.
$\frac{3}{8}$ L " ...	170.	2	340.	-	-	2	-
Amidships ...	✓	4	✓	✓	✓	4	✓
$\frac{3}{8}$ L from F.P. ...	340.	2	680.	-	-	2	-
$\frac{1}{2}$ L " ...	1358.	4	5432.	660.	660.	4	2640.
F.P.	3058.	1	3058.	2800.	2800.	1	2800.
Total			13755.				7390.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{6365 \cdot (75 - 2157)}{18 \cdot 5343} = + 189. m/m.$

If limited on account of midship superstructure.

Mean actual sheer aft
Mean standard sheer aft =

DEFICIENT.

Mean actual sheer forward
Mean standard sheer forward =Length of enclosed superstructure
Lforward of amidships = DEFICIENT.
aft of " = SHEERS.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck =	11.578.
Summer freeboard =	2.567.
Moulded draught (d) =	9.011

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{48} = 188. m/m.$ Addition for Winter North Atlantic Freeboard (if required) = **188 + 125 = 313 m/m.**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 21491.$

Tons per inch immersion at summer load water line

$T = 68.45.$

Deduction = $\frac{\Delta}{40 T} = \frac{21491}{40 \times 68.45} = 7.85" = 199. m/m.$

TABULAR FREEBOARD corrected for Flush Deck (if required).

Correction for coefficient $\frac{.776 + .68}{1.86} = 1.456 / 1.36$

	+	-
Depth Correction	344	✓
Deduction for superstructures	✓	359.
Sheer correction	189	✓
Round of Beam correction	✓	✓
Correction for Thickness of Deck amidships	✓	✓
Other corrections, scantlings, etc.	✓	✓
	533.	359.

Summer Freeboard = **2567.**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, **W**, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	387 m/m.	Tropical Fresh Water Freeboard	2180 m/m.
Fresh Water Line " "	199 m/m.	Fresh Water " "	2368 m/m.
Tropical Line " "	188 m/m.	Tropical " "	2379 m/m.
Winter Line below " "	188 m/m.	Winter " "	2735 m/m.
Winter North Atlantic Line " "	313 m/m.	Winter North Atlantic " "	2880 m/m.

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A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Roofs. length at Side = 32.165.
 + $\frac{2}{3} \times 1.800$ = $\frac{1.200}{33.365} = \text{Equin.}$

Bridges. 10.800. + $(\frac{2}{3} \times 1.600)$ = 11.867. $\times \frac{19.431}{20.041} = 11.505.$

$11.30 \times \frac{19.431}{20.041} = 1.095.$

Overhang aft. 1.130. $\times .75 \times \frac{19.431}{20.041} = 822.$

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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