

LLOYD'S REGISTER OF SHIPPING

SURVEYS FOR FREEBOARD

(COMPUTATION FOR ~~STEAMER~~, ~~SAILING SHIP~~, TANKER)

Received
 Index No.
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 Owners C11

Ship's Name 'NAVICELLA'	Official Number	Nationality and Port of Registry Dutch	Gross Tonnage	Date of Build 1944	Port of Survey
Moulded Dimensions: Length 140.510m Breadth 17.983m Depth 10.363m					Date of Survey 18/1/60
Freeboard Length 140.510m					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) _____ tons					Particulars of Classification +100A1
Coefficient of fineness for use with Tables .790					C.P.I.B.

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 10.363	(a) Where D is greater than Table depth (D - Table depth) R = 8.33(10.383 - 9.347)30 = +254mm	Moulded Breadth (B) 17.983m
Stringer plate029	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 1.016	Standard Round of Beam = $\frac{B \times 2}{50} = \frac{17.983 \times 2}{50} = 360mm$
Wood Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 365
Depth for Freeboard (D) = 10.383		Difference +5
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{5}{4} \times .5720 = -1mm$

DEDUCTION FOR SUPERSTRUCTURES.					Standard Height of Superstructure 2290mm
Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	R.Q.D.
Poop enclosed <i>equivalent</i> ... 29.319	29.319			29.319	
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed <i>equivalent</i> ... 14.377	14.377			14.377	
" overhang aft ... 2.402	1.802			1.802	
" overhang forward ...					
F'cle enclosed ... 14.643	14.643			14.643	
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ... 60.741	60.141			60.141	

Percentage covered $\frac{S}{L} = 43.23$

" " $\frac{S_1}{L} = 42.80$

Percentage from Table, Line A. Tanker **33.80**
 (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 **.3380** = **-361mm**

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	Product
A.P. ...	1424	1		1424	1422	1422	1422
$\frac{1}{4}$ L from A.P. ...	633	4		2532	632	632	2528
$\frac{2}{4}$ L " ...	158	2		316	155	155	310
Amidships ...	0	4		0	0	0	0
$\frac{3}{4}$ L from F.P. ...	316	2		632	311	311	622
$\frac{1}{4}$ L " ...	1266	4		5064	1267	1267	5068
F.P. ...	2848	1		2848	2857	2857	2857
Total ...				12816			12807

Mean actual sheer aft =
 Mean standard sheer aft = } *Deficient*

Mean actual sheer forward =
 Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =
 " " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{9}{18} \left(.75 - \frac{2161}{5339} \right) = \text{Nil}$

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.		Correction for coefficient 1.47
Depth to Freeboard Deck = 10.383	Displacement in salt water at summer load water line 16779	Depth Correction ... 254
Summer freeboard = 2.030	$\Delta = 16779$	Deduction for superstructures ... -361
Moulded draught (d) = 8.353	Tons per inch immersion at summer load water line 56.05	Sheer correction ... -
Keel allowance =	Deduction = $\frac{\Delta}{40 T} \text{ inches} = \frac{16779}{40 \times 56.05} = 7.48$	Round of Beam correction ... -
Extreme draught =	= 19cm	Correction for Thickness of Deck amidships ... -
Deduction for Tropical freeboard and addition for =		Other corrections, scantlings, etc. ... -
Winter freeboard = $\frac{d}{48} \text{ inches} = 174mm = 17cm$		254 362 -108mm
Addition for Winter North Atlantic Freeboard (if required) = 174 + 117 = 291mm = 29cm		Summer Freeboard = 2031

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

Tropical Fresh Water Line above Centre of Disc	36 cm	Tropical Fresh Water Freeboard	1.67 cm
Fresh Water Line " "	19 cm	Fresh Water " "	1.84 cm
Tropical Line " "	17 cm	Tropical " "	1.86 cm
Winter Line below " "	17 cm	Winter " "	2.26 cm
Winter North Atlantic Line " "	29 cm	Winter North Atlantic " "	2.32 cm