

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **NISO** Official Number **180029** Nationality and Port of Registry **British London** Gross Tonnage **8273** Date of Build **1944**

Port of Survey **Belfast & Glasgow**

Date of Survey **during construction**

Surveyor's Signature **Wm. B. G. & H. J. P. J.**

Moulded Dimensions: Length **460** Breadth **59** Depth **34**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **17733** tons

Coefficient of fineness for use with Tables **.791**

Particulars of Classification **HOB A/Carrying Petroleum bulk. class contemplated**

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	34	(a) Where D is greater than Table depth (D-Table depth) R = $(34.07 - 30.67) \times 3 = +10.20$		Moulded Breadth (B)	59
Stringer plate	.07	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50} = 14.16$	
Sheathing on exposed deck	✓			Ship's Round of Beam = $14\frac{3}{4}$	
$T \left(\frac{L-S}{L} \right) =$	nil			Difference	.59
Depth for Freeboard (D) =	34.07	If restricted by superstructures	✓	Restricted to	✓
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.59}{4} \times .5832 = -.09$	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>Eg. 4.4</i>	94.99	94.99	← 7'-6"		94.99
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed <i>Eg. 4.4</i>	46.86	46.86	← 7'-6"		46.86
" overhang aft	2.50	1.88			1.88
" overhang forward					
Fore enclosed	48.04	48.04	← 7'-6"		48.04
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	192.39	191.77			191.77

Standard Height of Superstructure **7.5'**

" " R.Q.D. ✓

Deduction for complete superstructure **42"**

Percentage covered $\frac{S}{L} = 41.82$

" " $\frac{S_1}{L} = 41.68$

Percentage from Table, Line A. *Tanker* **32.68**
(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 = $42 \times .3268 = -13.73$

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	56.00	1	56.00	56.4	56.4	1	56.4
$\frac{1}{8}$ L from A.P. ...	24.92	4	99.68	25.0	25.0	4	100.0
$\frac{3}{8}$ L " ...	6.16	2	12.32	6.2	6.2	2	12.4
Amidships ...	-	4	-	-	-	4	-
$\frac{5}{8}$ L from F.P. ...	12.32	2	24.64	12.4	12.4	2	24.8
$\frac{7}{8}$ L " ...	49.84	4	199.36	50.0	50.0	4	200.0
F.P. ...	112.00	1	112.00	112.1	112.10	1	112.1
Total ...			504.00				505.2

Mean actual sheer aft =
Mean standard sheer aft =

Mean actual sheer forward =
Mean standard sheer forward =

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

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{1.2}{18} \left(.75 - \frac{.2091}{.5409} \right) = -.05$

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.	Deduction for Fresh Water.	TABULAR FREEBOARD	
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line $\Delta = 16791$	corrected for Flush Deck (if required) $\frac{791 + .68}{136} = \frac{1.471}{1.36}$	77.70
Depth to Freeboard Deck = 34.07	Tons per inch immersion at summer load water line $T = 56.41$	Correction for coefficient	84.05
Summer freeboard = 6.71	Deduction = $\frac{\Delta}{40 T}$ inches $= \frac{16791}{40 \times 56.41} = 7.44 = 7\frac{1}{2}$	Depth Correction	10.20
Moulded draught (d) = 27.36		Deduction for superstructures	- 13.73
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $6.84 = 6\frac{3}{4}$		Sheer correction	- .05
Addition for Winter North Atlantic Freeboard (if required) = $6.84 + 4.60 = 11.44 = 11\frac{1}{2}$		Round of Beam correction	- .09
		Correction for Thickness of Deck amidships	-
		Other corrections, scantlings, etc.	-
			10.20 13.87 - 3.67
			Summer Freeboard = 80.38

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

Tropical Fresh Water Line above Centre of Disc	...	14 1/4"	Tropical Fresh Water Freeboard	...	5' 6 1/4"
Fresh Water Line	"	7 1/2"	Fresh Water	"	6' 1"
Tropical Line	"	6 3/4"	Tropical	"	6' 1 3/4"
Winter Line	below	6 3/4"	Winter	"	7' 3 1/4"
Winter North Atlantic Line	"	11 1/2"	Winter North Atlantic	"	7' 8"

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.

Pop
 $\frac{2}{3} \times 3.62 = \frac{92.58}{2.41}$
94.99

Bridge
 $\frac{2}{3} \times 4.54 = \frac{43.83}{3.03}$
46.86

Correct

Trade of ship

INTERNATIONAL

Names of sister ships

"NORRISIA" & "NASSARIUS"

Builder's name and yard number

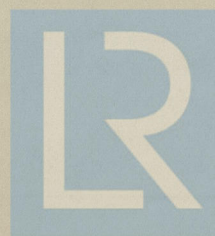
HARLAND & WOLFF LD. BELFAST No 1198

Owners

ANGLO SAZON PETROLEUM CO LD

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