

amended.

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD

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

For LONDON OFFICE ONLY

Received

Index No.

Govt. Copy

Owners C11

Ship's Name ASTORIA	Official Number	Nationality and Port of Registry NORWEGIAN KRAGERØ	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 490.98 ✓ Breadth 65.25 ✓ Depth 35.83 ✓					Date of Survey 5.3.56
Freeboard Length					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 21790 / tons					Particulars of Classification H100 A1.
Coefficient of fineness for use with Tables .798 /					(ORIG. CARRIER)

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	35.83 ✓	(a) Where D is greater than Table depth (D—Table depth) R =	(35.90 - 32.07) / 3 = 11.49 ✓	Moulded Breadth (B)	65.25 ✓
Stringer plate07 ✓	(b) Where D is less than Table depth (if allowed) (Table depth—D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$ =	15.66 ✓
Wood Sheathing on exposed deck				Ship's Round of Beam =	15.75 ✓
$T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Difference	.09 ✓
Depth for Freeboard (D) =	35.90 ✓			Restricted to	
				Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right)$ =	.09 / 4 × .3438 = .01 ✓

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	99.21 ✓	99.21 ✓	7.67 ✓		99.21 ✓	Standard Height of Superstructure 7.5' ✓
" overhang						" " R.Q.D. ✓
R.Q.D. enclosed						Deduction for complete superstructure 42.0" ✓
" overhang						Percentage covered $\frac{S}{L} =$ 36.91 ✓
Bridge enclosed Equival	37.62 ✓	33.86 ✓	7.50 ✓		33.86 ✓	" " $\frac{S_1}{L} =$ 65.62 ✓
" overhang aft						" " $\frac{E}{L} =$ 62.68 ✓
" overhang forward						Percentage from Table, Line A—Spec 2. 54.95 ✓
F'cle enclosed	40.72 ✓	40.72 ✓	7.50 ✓		40.72 ✓	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B.
Trunk aft		94.50 ✓	7.67 ✓	× 9	76.05 ✓	(corrected for absence of forecastle (if required))
" forward		57.32 ✓	7.50 ✓	× 9	51.59 ✓	Interpolation for bridge less than .2L (if required)
Tonnage opening aft						Deduction = 42.0 × .5495 = 23.08" ✓
" " forward						
Total	177.55 ✓	315.61 ✓			301.48 ✓	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	58.10	1	58.10	47.44	47.44	1	47.44
$\frac{1}{4}$ L from A.P.	25.85	4	103.40	9.84	9.84	4	39.36
$\frac{2}{4}$ L "	6.39	2	12.78	—	—	2	—
Amidships	0	4	0	0	0	4	0
$\frac{2}{4}$ L from F.P.	12.78	2	25.56	—	—	2	—
$\frac{1}{4}$ L "	51.71	4	206.84	30.12	30.12	4	120.48
F.P.	116.20	1	116.20	100.20	100.20	1	100.20
Total			522.88				307.48

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{215.40}{18} (.75 - .1846) = + 6.77"$ ✓
 If limited on account of midship superstructure. **.5664** If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. 35.90 Depth to Freeboard Deck = 35.90 ✓ 7.12 Summer freeboard = 7.12 ✓ 28.78 Moulded draught (d) = 28.80 ✓ Keel allowance = Extreme draught = Deduction for Tropical freeboard and addition for = Winter freeboard = $\frac{d}{4}$ inches = 7.20 ✓ Addition for Winter North Atlantic Freeboard (if required) = 7.20 + 4.91 = 12.04"	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 5.78" ✓	TABULAR FREEBOARD (TANKER FBD). corrected for Flush Deck (if required) .798 × .68 = 1.478 1.36 Correction for coefficient Depth Correction 11.49 ✓ Deduction for superstructures 23.08 ✓ Sheer correction 6.77 ✓ Round of Beam correction01 ✓ Correction for Thickness of Deck amidships Other corrections, scantlings, etc. 18.26 23.09 -4.83 Summer Freeboard = 85.30 ✓	82.94 ✓ 90.13 ✓ 6-3-56
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :—

Tropical Fresh Water Line above Centre of Disc	15.4"	397 ✓	Tropical Fresh Water Freeboard	5.10"	1778 ✓
Fresh Water Line	8"	203 ✓	Fresh Water	6.54"	1962 ✓
Tropical Line	4.4"	184 ✓	Tropical	6.16"	1901 ✓
Winter Line below	4.4"	184 ✓	Winter	2.82"	2349 ✓
Winter North Atlantic Line	12"	305 ✓	Winter North Atlantic	8.14"	2470 ✓

ASTURIA.

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.

$$\begin{array}{rcl} \text{Trunk. aft :-} & \begin{array}{r} \checkmark \quad 172.98 \quad \checkmark \quad 58405 \\ 7.87 \times 21.98 \quad + 166.42 \times 32.09. \\ \hline 65.25 \checkmark \end{array} & = \quad \begin{array}{r} 5613.48 \checkmark \\ \hline 65.25 \checkmark \end{array} = 94.50 \checkmark \end{array}$$

$$\begin{array}{rcl} \text{Fore.} & = & \begin{array}{r} 116.53 \checkmark \\ (121.78 - 5.25) 32.09. \\ \hline 65.25. \end{array} = 57.32 \checkmark \end{array}$$

Trade of ship _____

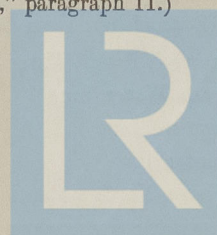
Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____ : _____ :

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950," paragraph 11.)



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