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(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No. 32843

LANTAO

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name EX GRAIGLAS.	Official Number 16480 1703	Nationality and Port of Registry MONROVIA BRITISH Basin LIBERIA 42	Gross Tonnage 4312	Date of Build 1940	Port of Survey Sunderland
Moulded Dimensions: Length 380.92 Breadth 54.71 Depth 26.37 ✓ To centre of rudder stock.					Date of Survey While Building
Moulded displacement at moulded draught = 85 per cent. of moulded depth 9867 tons					Surveyor's Signature W. C. Miller
Coefficient of fineness for use with Tables 7393 743 ✓					Particulars of Classification +100A.1. (contemplated)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 26.37	(a) Where D is greater than Table depth (D - Table depth) R = (26.40 - 25.39) 2.930 = + 2.96	Moulded Breadth (B) 54.71 42
Stringer plate ... 38.03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 1.01 ✓	Standard Round of Beam = $\frac{B \times 12}{50} =$ 13.07
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 13 1/2
Depth for Freeboard (D) = 26.40		Difference Excess .43
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$.43 x 1678 = -.02

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed Equi.	41.85	41.85	8.5	✓	41.85	Standard Height of Superstructure 7.31
.. overhang R.Q.D. ✓
R.Q.D. enclosed						Deduction for complete superstructure 40.73
.. overhang						Percentage covered $\frac{S}{L} =$ 81.66
Bridge enclosed...	234.25	234.25	8.5	✓	234.25	.. $\frac{S_1}{L} =$ 81.62
.. overhang aft						.. $\frac{E}{L} =$ 81.62
.. overhang forward	.29	.15			.15	Percentage from Table, Line A. and B 77.31
Fore enclosed ...	34.42	34.42	8.5	✓	34.42	(corrected for absence of forecastle (if required)) ✓
.. overhang25	.25			.25	Percentage from Table, Line B. ✓
Trunk aft ...						(corrected for absence of forecastle (if required)) ✓
.. forward ...						Interpolation for bridge less than 2L (if required) ✓
Tonnage opening aft						Deduction = 40.73 x 77.31 = - 31.49
.. forward						
Total ...	311.06	310.92			310.92	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	48.09	1		48.09	53 3/4	53.75	1		53.75	Mean actual sheer aft = Excess
1/8 L from A.P. ...	21.40	4		85.60	24	24.00	4		96.00	Mean actual sheer forward = Excess
2/8 L ..	5.29	2		10.58	5 5/8	5.62	2		11.26	Mean standard sheer forward
Amidships ...	-	4		-	0	-	4		-	Length of enclosed superstructure forward of amidships = >.1
3/8 L from F.P. ...	10.58	2		21.16	11 1/2	11.50	2		23.00 aft of .. = >.1
1/8 L ..	42.80	4		171.20	45 1/2	45.50	4		182.00	
F.P. ...	96.18	1		96.18	104 3/4	104.75	1		104.75	
Total ...				432.81					470.76	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{37.95}{18} \left(\frac{75-40.83}{34.17} \right) = -.72$

If limited on account of midship superstructure. ✓

If limited to maximum allowance of 1 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	Correction for coefficient	65.68
Depth to Freeboard Deck = 26.40	$\Delta =$ 102.63	743 + 68 = 1423 / 1.36	68.72
Summer freeboard = 3.29	Tons per inch immersion at summer load water line	Depth Correction ...	2.96
Moulded draught (d) = 23.11	T = 41.73	Deduction for superstructures ...	31.49
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 5.78 = 5 3/4	Deduction = $\frac{\Delta}{40T}$ inches = 6.15	Sheer correction72
Addition for Winter North Atlantic Freeboard (if required) =	= 6 1/4	Round of Beam correction02
		Correction for Thickness of Deck amidships	-
		Other corrections, scantlings, etc. ...	-
		Summer Freeboard = 39.45	

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

Tropical Fresh Water Line above Centre of Disc ...	12"	Tropical Fresh Water Freeboard ...	2' 3 1/2"
Fresh Water Line ..	6 1/4"	Fresh Water ..	2' 9 1/4"
Tropical Line ..	5 3/4"	Tropical ..	2' 9 3/4"
Winter Line below ..	5 3/4"	Winter ..	3' 9 1/4"
Winter North Atlantic Line ..	✓	Winter North Atlantic ..	✓

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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.

Actual displacement at actual draft 23'3" = 10263 tons

Ton Per Inch = 41.73

Poop.

21-3

16-1 1/2

5-1 1/2

5.12 x 2.5

21.25

= 0.60

41.25

41.85

Trade of ship

Names of sister ships

Builder's name and yard number

Meson. J. L. Thompson & Sons Ltd

Nº 598

Owner

The Graig S.S. Co. Ltd

Fee £

15

Will be charged on completion



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Foundation