

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name PATRICIA. (TANKER) To CR. of Stow.	Official Number	Nationality and Port of Registry PANAMA.	Gross Tonnage 17736	Date of Build	Port of Survey Kobe
Moulded Dimensions: Length 544.98 Breadth 92.33 Depth 44.37					Date of Survey 12/52
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing)			41.840 tons		Surveyor's Signature <i>Reynold</i>
Coefficient of fineness for use with Tables .783					Particulars of Classification +100 A1. <i>Carrying Petroleum in Bulk</i> <i>conspicuous</i>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 44.37	(a) Where D is greater than Table depth (D-Table depth) R = (44.46 - 39.67)3 = +14.37	Moulded Breadth (B) 83.33
Stringer plate09	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 4.79	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{83.33 \times 12}{50} = \mathbf{20.00}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 19.69
Depth for Freeboard (D) = 44.46		Difference .31
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.31}{4} \times .5577 = \mathbf{.04}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>EQUV</i>	139.72	139.72	8.73		139.72
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed <i>EQUV</i>	43.77	43.77	8.30		43.77
" overhang aft	4.80	3.60	8.30		3.60
" overhang forward					
F'cle enclosed	76.07	76.07	7.70		76.07
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	264.36	263.16			263.16

Standard Height of Superstructure	7.50'
" " R.Q.D.	
Deduction for complete superstructure	42"
Percentage covered $\frac{S}{L} =$	44.43
" " $\frac{S_1}{L} =$	44.23
" " $\frac{E}{L} =$	
Percentage from Table, Line A TANKER.	35.23
(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" x .3523 = -14.80"	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	69.50	1		69.50	32.09	32.09	1		32.09
$\frac{1}{4}$ L from A.P.	30.93	4		123.72	3.74	3.74	4		14.96
$\frac{3}{4}$ L "	7.64	2		15.28		0	2		0
Amidships	0	4		0		0	4		0
$\frac{3}{4}$ L from F.P.	15.29	2		30.58		0	2		0
$\frac{1}{4}$ L "	61.85	4		247.40	6.85	6.85	4		27.40
F.P.	139.00	1		139.00	62.99	62.99	1		62.99
Total				625.48					137.44

Mean actual sheer aft =
Mean standard sheer aft =

Mean actual sheer forward =
Mean standard sheer forward =

DEFICIENT.

Length of enclosed superstructure forward of amidships = } DEFICIENT.
" " aft of " = } SHEERS.

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{488.04}{18} = \mathbf{+27.11}$

If limited on account of midship superstructure.

$(.75 - \frac{S}{2L}) = \frac{488.04}{18} = \mathbf{+27.11}$

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 44.46 Summer freeboard = 10.79 Moulded draught (d) = 33.67 Keel allowance = ✓ Extreme draught = ✓ Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 8.42 = 24mm. Addition for Winter North Atlantic Freeboard (if required) = 8.42 + 5.95 = 14.37 = 365mm.	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = \mathbf{37150 \text{ TONS}}$ Tons per inch immersion at summer load water line $T = \mathbf{100.70}$ Deduction = $\frac{\Delta}{40 T}$ inches = 9.22 = 234mm.	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.783 + .68}{1.36} = \mathbf{1.463 / 1.36}$ <table border="1"> <tr> <th></th><th>+</th><th>-</th></tr> <tr> <td>Depth Correction</td><td>14.37</td><td></td></tr> <tr> <td>Deduction for superstructures</td><td></td><td>14.80</td></tr> <tr> <td>Sheer correction</td><td>14.31</td><td></td></tr> <tr> <td>Round of Beam correction</td><td></td><td>.04</td></tr> <tr> <td>Correction for Thickness of Deck amidships</td><td></td><td></td></tr> <tr> <td>Other corrections, scantlings, etc.</td><td></td><td></td></tr> <tr> <td></td><td>29.68</td><td>14.84</td></tr> <tr> <td>Summer Freeboard =</td><td>129.43</td><td></td></tr> </table>		+	-	Depth Correction	14.37		Deduction for superstructures		14.80	Sheer correction	14.31		Round of Beam correction		.04	Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.				29.68	14.84	Summer Freeboard =	129.43	
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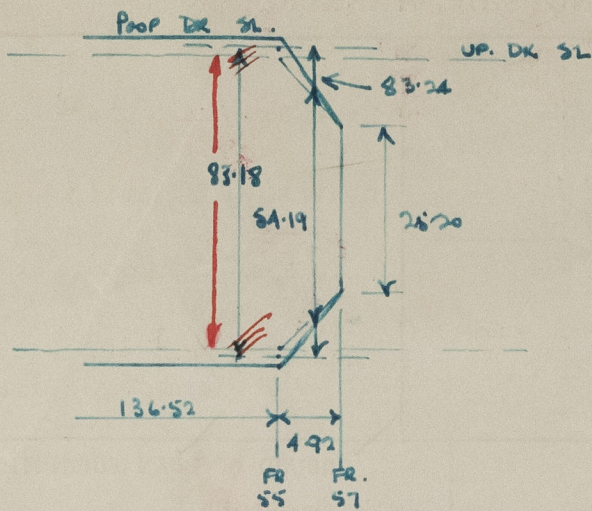
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	44.8mm.	Tropical Fresh Water Freeboard	2839
Fresh Water Line " "	234	Fresh Water " "	3053
Tropical Line " "	214	Tropical " "	3073
Winter Line below " "	214	Winter " "	3501
Winter North Atlantic Line " "	365	Winter North Atlantic " "	3652

Patricia.

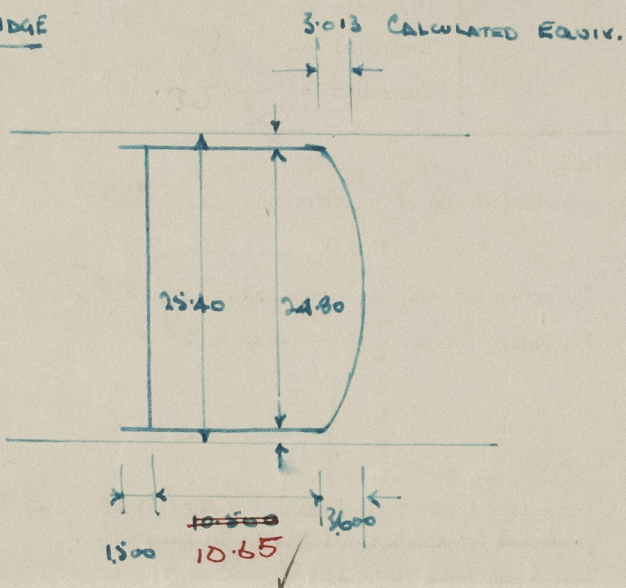
A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Poof



$$\begin{aligned} & \frac{83.18}{2} + 25.20 = 54.19 \quad \checkmark \quad * \text{ AT HALF HEIGHT.} \\ & \frac{4.92 \times 54.19}{83.18} = 3.20 \text{ EQU. L.} \quad \checkmark \\ & 83.18 + 136.52 = 139.72 \text{ L.} \quad \checkmark \end{aligned}$$

BRIDGE



SEE TONNAGE CALCULATION P. 5.

$$\begin{aligned} \text{Breadth Corr.} & \frac{(10.65 + 3.013) \times 24.80}{25.400} = 13.540 = 43.77' \\ \text{overhang} & \frac{15.00 \times 24.800}{25.400} = 1.466 = 4.80' \quad \checkmark \end{aligned}$$

DECK HEIGHTS.

$$\begin{aligned} \textcircled{1} \text{ Poof. Top Beam at CR. To UPP. DE.} & \quad 2.600 \\ \text{Wood on Poof.} & \quad .063 \\ \text{Plating on Poof} & \quad .0085 \\ \text{Upper DE.} & \quad .012 \\ \text{HT} = 2.600 + (.063 + .0085 - .012) & = 2.6595 = 8.73' \\ \textcircled{2} \text{ Bridge} & \\ \text{Top of Beam at CR. To UPP. DE.} & \quad 2.550 \\ \text{Plating on Bridge} & \quad .0085 \\ \text{Upper DE.} & \quad .028 \\ \text{DE HT.} = 2.550 + (.0085 - .028) & = 2.5305 = 8.30' \\ \textcircled{3} \text{ File} & \\ \text{Top of Beam at CR. To UPP. DE.} & \quad 2.350 \\ \text{Plating on File} & \quad .009 \\ \text{Upper DE.} & \quad .013 \\ \text{DE HT} = 2.350 + (.009 - .013) & = 2.346 = 7.70' \end{aligned}$$

Trade of ship International

Names of sister ships /

Builder's name and yard number Kanawake Ship No 925

Owners [Signature]

Fee £ /



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