

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

20299

Ship's Name S.S. "TUDOR QUEEN"	Official Number 168071	Nationality and Port of Registry BRITISH. LONDON.	Gross Tonnage Appro. 1029 1040.	Date of Build 1941.	Port of Survey Burntisland (LEITH.)
Moulded Dimensions: Length 202.0 Breadth 32.58 Depth 15.125 4.29 R.Q.D.					Date of Survey While building.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1744 2 12.85 tons					Surveyor's Signature Robert Wood
Coefficient of fineness for use with Tables .722.					Particulars of Classification 100.A.1.

Depth for Freeboard (D). 4'-3 1/2" R.Q.D.	Depth correction.	Round of Beam correction.
Moulded depth ... 15'-1 1/2"	(a) Where D is greater than Table depth (D - Table depth) R = (15.16' - 13.47') x 1.555 = + 2.63"	Moulded Breadth (B) 32.58
Stringer plate ... 3/8"	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 1.69	Standard Round of Beam = $\frac{B \times 12}{50} =$ 7.82"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$.031	If restricted by superstructures ✓	Ship's Round of Beam = 7.875"
Depth for Freeboard (D) = 15.16'		Difference .055"
		Restricted to ✓
		Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) =$.055 x .166 = Nil

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	38.75	38.75	2.69 ABOVE R.Q.D.	7.00	38.75
" overhang ...	✓	✓	✓	✓	✓
R.Q.D. enclosed ...	108.00	108.00	4.29	✓	108.00
" overhang ...	✓	✓	✓	✓	✓
Bridge enclosed ...	✓	✓	✓	✓	✓
" overhang aft ...	✓	✓	✓	✓	✓
" overhang forward ...	✓	✓	✓	✓	✓
Fore enclosed open ...	23.25	20.20	7.00	✓	20.20
" overhang ...	✓	1.53	✓	✓	1.53
Trunk aft ...	✓	✓	✓	✓	✓
" forward ...	✓	✓	✓	✓	✓
Tonnage opening aft ...	✓	✓	✓	✓	✓
" " forward ...	✓	✓	✓	✓	✓
Total ...	170.00	168.48			168.48

Standard Height of Superstructure	6.00' 2.69 Poop ABOVE R.Q.D.
" " R.Q.D.	3.680 4.29
Deduction for complete superstructure	26.20
Percentage covered $\frac{S}{L} =$	84.16
" $\frac{S_1}{L} =$	83.40
" $\frac{E}{L} =$	83.40
Percentage from Table, Line A.	79.51
(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 = $26.20 \times .7951 =$	- 20.83"

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	30.20	1		30.20	27"	46.65	1		46.65
1/2 L from A.P. ...	13.44	4		53.76	12 1/4"	10.94	4		43.76
2/3 L " ...	3.32	2		6.64	2 3/4"	5.18	2		10.36
Amidships ...	-	4		-	0	-	4		-
2/3 L from F.P. ...	6.64	2		13.28	8 1/2"	8.50	2		17.00
1/2 L " ...	26.88	4		107.52	32 1/2"	32.50	4		130.00
F.P. ...	60.40	1		60.40	72"	71.00	1		71.00
Total ...				271.80					360.17

Mean actual sheer aft = Excess -
Mean standard sheer aft = Excess -

Mean actual sheer forward = Excess -
Mean standard sheer forward = Excess -

Length of enclosed superstructure forward of amidships = .5
L

" " aft of " = .1

Sheer height at Intact Poop Bkd = 10 1/2"

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{88.17}{18} \times (.75 - .4208) = -1.62"$
If limited on account of midship superstructure. ✓

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient .722 + .68 = 1.402 / 1.36
R.Q.D.	$\Delta = 2051 \text{ TONS } 214'10"$	Depth Correction ... 2.63
Depth to Freeboard Deck = 14.45	Tons per inch immersion at summer load water line	Deduction for superstructures ... 10.83
Summer freeboard = 4.64	$T = 13.12$	Sheer correction ... 1.59
Moulded draught (d) = 14.81	Deduction = $\frac{\Delta}{40T}$ inches	Round of Beam correction Height of Raised Quarter
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.70 = 3 3/4"	= 3.91 ✓	Correction for thickness of Deck amidships
Addition for Winter North Atlantic Freeboard (if required) = 5 3/4"	= 4"	Other corrections, scantlings, etc. ...
		Summer Freeboard = 55.84 7

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

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

7 FEB 1941

Tudor Queen.

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.

$$\begin{array}{r} \text{Fee} \\ \frac{1}{10} = \frac{23.25}{20.20} \\ \hline 3.05 \end{array}$$

Virtual Sheer aft.

$$\begin{array}{r} \text{Actual height of R.P. De} = 4.29' \\ \text{Standard} = 3.68' \end{array}$$

$$\begin{array}{r} \frac{1}{10} 101.00 \\ P 38.75 \\ \hline 62.25 \end{array}$$

$$\begin{array}{r} \text{Diff.} = 0.61' = 7.32 \\ \text{Actual Sheer at poop front} = \frac{10.40}{17.72} \end{array}$$

$$\text{Virtual Sheer at A.P.} = 17.72 \times \left(\frac{101}{62.25} \right)^2 = 46.65''$$

$$\begin{array}{r} \text{Actual Sheer at A.P.} = 27.00 \\ \text{Height of poop} = 83.76 \\ \hline 110.76 \\ \text{Virtual Sheer} = \frac{46.65}{64.11} \end{array}$$

$$\begin{array}{r} \text{Height of} 2.69 \\ \text{poop} 4.29 \\ \hline 6.98 \\ = 83.76 \end{array}$$

Which is > standard height R.P. De.

Trade of ship General.

Names of sister ships ✓

Builder's name and yard number The Burntisland Shipbuilding Co. Ltd. Yard N° 247.

Owners British Channel Islands Shipping Co. Ltd. London.

Fee £ : (To be charged with 1st entry.)



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Foundation