

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "TURKISTAN"	Official Number 167156	Nationality and Port of Registry BRITISH. LONDON.	Gross Tonnage 6935.26	Date of Build 1938	Port of Survey NEWCASTLE ON TYNE.
Moulded Dimensions: Length 450'-0" Breadth 58'-29" Depth 32'-17" To aft side of rudder post					Date of Survey WHILE BUILDING.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 15680 tons Ext. D = MLD. D + GAR. D + 2 x KEEL T = MLD. D + .68" + 2 x .85"					Surveyor's Signature J. Rennie
Coefficient of fineness for use with Tables .765					Particulars of Classification +100A1. (CONTEMPLATED).

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 32'-17"	(a) Where D is greater than Table depth (D - Table depth) R = (32'-21" - 30'-00") 3 = +6'-63"	Moulded Breadth (B) 58'-29"
Stringer plate42"	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50}$ = 13'-99"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	✓	Ship's Round of Beam = 14"
Depth for Freeboard (D) = 32'-21"	If restricted by superstructures ✓	Difference Excess. .01
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right)$ = $\frac{.01^2}{4} (5185) = \text{Nil}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)	
Poop enclosed EQUIVALENT	39'-90"	39'-90"	8.5	✓	39'-90"	Standard Height of Superstructure 7'-5"
" overhang ...	4'-40"					" " R.Q.D. 42"
R.Q.D. enclosed	✓					Deduction for complete superstructure
" overhang	✓					Percentage covered $\frac{S}{L} =$ 48.31
Bridge enclosed Da.	133'-58"	133'-58"	9.0	✓	133'-58"	" " $\frac{S_i}{L} =$ 48.14
" overhang aft	4'-39"	3'-29"			3'-29"	" " $\frac{E}{L} =$ 48.14
" overhang forward	1'-00"					Percentage from Table, Line A. ✓
Fore enclosed Da.	36'-17"	36'-17"	8.5	✓	36'-17"	(corrected for absence of forecastle (if required))
" overhang	3'-58"	3'-70"			3'-70"	Percentage from Table, Line B. 34.42
" forward						(corrected for absence of forecastle (if required))
Tonnage opening aft						Interpolation for bridge less than 2L (if required) ✓
" forward						Deduction = 42" x 34.42 = -14'-46"
Total	217'-74"	216'-64"			216'-64"	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	55.00	1	✓	55.00	63	63.00	1	✓	63.00	Mean actual sheer aft = Excess
$\frac{1}{2}$ L from A.P. ...	24.475	4	✓	97.90	28	28.00	4	✓	112.00	Mean actual sheer forward = Excess
$\frac{3}{8}$ L " ...	6.05	2	✓	12.10	7	7.00	2	✓	14.00	Mean standard sheer forward
Amidships ...	✓	4	✓	✓	✓	✓	4	✓	✓	Length of enclosed superstructure forward of amidships = >.1L
$\frac{3}{8}$ L from F.P. ...	12.10	2	✓	24.20	13.5	13.50	2	✓	27.00	" " aft of " = >.1L.
$\frac{1}{2}$ L " ...	48.95	4	✓	195.80	57	57.00	4	✓	228.00	
F.P. ...	110.00	1	✓	110.00	126	126.00	1	✓	126.00	
Total				1495.00					570.00	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{75}{18} \left(\frac{.75 - .2419}{5081} \right) = -2.12"$

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.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **32'-21"**

Summer freeboard = **6'-87"**

Moulded draught (d) = **25'-34"**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **6'-33" = 6'-4"**

Addition for Winter North Atlantic Freeboard (if required) = **✓**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ **14511**

Tons per inch immersion at summer load water line

$T =$ **52.9**

Deduction = $\frac{\Delta}{40T}$ inches

$= \frac{14511}{40 \times 52.9} = 6.86" = 6\frac{3}{4}"$

Ext. d. **24'** **13540** **52.4**

25' **14170** **52.7**

26' **14800** **53.1**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

765 + .68 = 1.445

1.36

1.36

Depth Correction ... **6'-63"**

Deduction for superstructures ... **14'-46"**

Sheer correction ... **2'-12"**

Round of Beam correction ... **✓**

Correction for Thickness of Deck amidships ... **✓**

Other corrections, scantlings, etc. ... **✓**

Summer Freeboard = **82'-59"**

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

Tropical Fresh Water Line above Centre of Disc ... **13"**

Fresh Water Line " " ... **6'-34"**

Tropical Line " " ... **6'-4"**

Winter Line below " " ... **6'-4"**

Winter North Atlantic Line " " ... **✓**

Tropical Fresh Water Freeboard ... **5'-10 1/2"**

Fresh Water " " ... **5'-9 1/2"**

Tropical " " ... **6'-33 1/4"**

Winter " " ... **6'-4 1/4"**

Winter North Atlantic " " ... **✓**

Turkistan.

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.

Poap. $\frac{32 \times 4.85}{49} = \frac{43.05}{3.15}$ ✓
 39.90 equivalent ✓

Bridge $\frac{2 \times 8 \times 12.08}{57} = 3.39'$ ✓ $9.7 \times \frac{2}{3} = 6.47$ ✓
 $\frac{130.5}{+6.47}$ ✓
 $\frac{136.97}{-3.39}$ ✓
 $\frac{133.58'}{}$ ✓

Forecastle $\frac{24 \times 4.5}{44} = \frac{38.62}{2.45}$ ✓
 $\frac{36.17}{}$ ✓

Trade of ship International.

Names of sister ships "SHAHRISTAN"

Builder's name and yard number Messrs John Readhead and Sons Ltd. N° 514.

Owners Strick Line (1923) Ltd.

Fee £ 17-0-0.
 To be rendered with
 fee for first entry.



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