

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name DESH SEWAK "SOYA CHRISTINA"	Official Number 199139 9142	Nationality and Port of Registry INDIAN SWEDISH STOCKHOLM BOMBAY	Gross Tonnage 7363 (BRIT) 7510 SW	Date of Build 1950	Port of Survey SUNDERLAND
Moulded Dimensions: Length 440'-9 1/2" Breadth 58'-9" Depth 33'-0.61" To CR. LINE OF R. STOCK.					Date of Survey WHILE BUILDING
Moulded displacement at moulded draught = 85 per cent. of moulded depth 15850 tons					Surveyor's Signature <i>James K. Young</i>
Coefficient of fineness for use with Tables .761 .763					Particulars of Classification

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 33'-0.61"	(a) Where D is greater than Table depth (D - Table depth) R = (33-11-29.39) 3 = +11.16"	Moulded Breadth (B) 58'-9"
Stringer plate .68"06	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 3.72	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{58 \times 12}{50} = 14.10$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 14"
Depth for Freeboard (D) = 33.11		Difference = 10.10
		Restricted to
		Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{10.10}{4} \times 5029 = +.01"$

DEDUCTION FOR SUPERSTRUCTURES.				
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Effective Length (E)
Poop enclosed <i>Equino</i>	121.21	121.21	8'-0"	121.21
" overhang				
R.Q.D. enclosed				
" overhang				
Bridge enclosed <i>Equino</i>	41.37	41.37	8'-0"	41.37
" overhang aft	4.82	3.62		3.62
" overhang forward				
F'cle enclosed <i>Equino</i>	52.92	52.92	6'-7.5"	51.57
" overhang				
Trunk aft				
" forward				
Tonnage opening aft				
" " forward				
Total	220.32	219.12		217.77

Standard Height of Superstructure	7.50'
" " R.Q.D.	✓
Deduction for complete superstructure	42.00"
Percentage covered $\frac{S}{L} =$	49.99
" " $\frac{S_1}{L} =$	49.71
" " $\frac{E}{L} =$	49.40
Percentage from Table, Line A. TANKER.	40.40
(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 =	42.00 * 40.40 = 16.97"

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P.	54.08	1		54.08	30"	30.00	1
1/4 L from A.P.	24.07	4		96.28	4"	4.00	4
2/4 L	5.95	2		11.90			2
Amidships	✓	4		✓			4
3/4 L from F.P.	11.90	2		23.80			2
1/4 L	48.13	4		192.52	5 1/8"	.625	4
F.P.	108.16	1		108.16	1'-2"	14.00	1
Total				486.74			

Mean actual sheer aft = **30.00**
Mean standard sheer aft = **30.00**

Mean actual sheer forward = **16.00**
Mean standard sheer forward = **16.00**

Length of enclosed superstructure forward of amidships = **L**
aft of " = **TANKER**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{424.24}{18} \left(.75 - \frac{2500}{5000} \right) = +.1178$
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	corrected for Flush Deck (if required)
Depth to Freeboard Deck = 33.11	$\Delta = 14780 \text{ Tons @ } 11755 \text{ } 26'-3.72"$	Correction for coefficient $\frac{762.4 \times 68}{1.36} = \frac{1.442}{1.36}$
Summer freeboard = 6.93	Tons per inch immersion at summer load water line	
Moulded draught (d) = 26.18	T = 52.1	
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40 T} \text{ inches} = \frac{14780}{40 \times 52.1} = 7.08" = 180 \text{ mfm.}$	
Winter freeboard = $\frac{d}{4} \text{ inches} = 6.55" = 166 \text{ mfm.}$		
Addition for Winter North Atlantic Freeboard (if required) = 6.55 + 4.41 = 10.96" = 278 mfm.		

Depth Correction	11.16	✓
Deduction for superstructures	16.97	✓
Sheer correction	11.78	✓
Round of Beam correction	.01	✓
Correction for Thickness of Deck amidships	✓	✓
Other corrections, scantlings, etc.	✓	✓
Summer Freeboard =	83.13	

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc	3 1/2"	346 mfm.	Tropical Fresh Water Freeboard
Fresh Water Line	7"	180 mfm.	Fresh Water
Tropical Line	6 1/2"	166 mfm.	Tropical
Winter Line	6 1/2"	166 mfm.	Winter
Winter North Atlantic Line	1 1/4"	278 mfm.	Winter North Atlantic

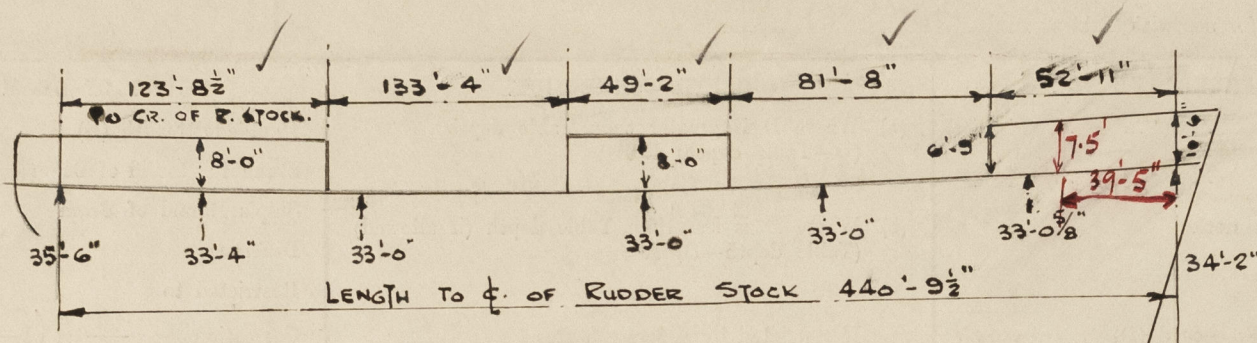
2111 mfm. **6'-11 1/4"**
1765 **5'-9 3/4"**
1931 **6'-4 1/4"**
1945 **6'-4 3/4"**
2277 **7'-5 3/4"**
2389 **7'-10 1/4"**

Soya Christina

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.

Poop. Length at side = 116.21.
 $\frac{2}{3} \times 7.5' = \frac{5.00}{121.21'}$

Fcle. Length fwd of stand height of fcle = 39.42' ✓
 Equiv " aft " " " " " = $\frac{13.5 \times 6.75}{7.5} = \frac{12.15}{51.57'}$ ✓
 07L = 30.86'



Bridge

Downd Front.

0.	1/2'	-
2.67.	2'	5.34 ✓
3.13.	1'	3.13 ✓
3.50.	2'	7.00 ✓
3.92.	1 1/2'	5.88 ✓
4.63.	4'	18.52 ✓
5.13.	2'	10.26 ✓
5.58.	4'	22.32 ✓
5.88.	2'	11.76 ✓
6.18.	4'	24.72 ✓
6.29.	1'	6.29 ✓

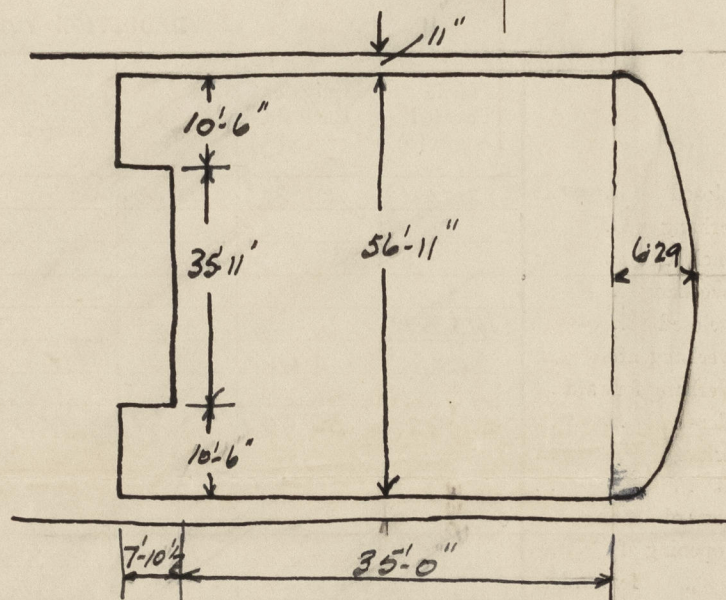
$$\frac{115.22 \times \frac{2}{3} + 3.558}{56.92} = 4.79' \checkmark$$

Length to aft. Bhd = 35.00'

Side houses. $\frac{21 \times 7.88}{56.92} = 2.91' \checkmark$

$$\frac{42.70 \times 56.92}{58.75} = 41.37' \checkmark \text{ Equiv length.}$$

$$O'hang = 7.88 - 2.91 = 4.97 \times \frac{56.92}{58.75} = 4.82' \checkmark \text{ Equiv. O'hang.}$$



Trade of ship. TANKER

Names of sister ships. -

Builder's name and yard number. SHORT BROTHERS SUNDERLAND SHIP N° 507.

Owners. REDERI A-B. SOYA.

Fee £ Will be charged on JE



© 2020

Lloyd's Register Foundation