

Scantling case. (3)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name JOHN CROWN & SONS Nos 230 & 31.	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 316' ✓ Breadth 46' ✓ Depth 17.5' ✓ <i>to centre of main deck</i>					Date of Survey 17-3-48
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature EJ
Coefficient of fineness for use with Tables .77 (assumed as before) ✓					Particulars of Classification 100 A1 Carrying Petroleum in bulk.

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 17.50	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B) 46' ✓
Stringer plate ... 4604	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 11.04$ ✓
Sheathing on exposed deck	(21.07-17.54) 2.431 = -8.58"	Ship's Round of Beam = 11.00 ✓
$T \left(\frac{L-S}{L} \right) =$	3.53	Difference = -.04 ✓
Depth for Freeboard (D) = 17.54	If restricted by superstructures No ✓	Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.04}{4} \times .1143 = .01143$ ✓

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)
Poop enclosed ... ✓	93.00	93.00 ✓	7.00	✓	93.00
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
Fore enclosed ... ✓	38.00	38.00 ✓	7.00	✓	38.00
„ overhang ...					
Trunk aft ... <i>see over</i>		117.30 ✓	7.00	✓	117.30
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	131.00	248.30 ✓			248.30

Standard Height of Superstructure **6.66'** ✓

„ „ R.Q.D. ✓

Deduction for complete superstructure **36.40** ✓

Percentage covered $\frac{S}{L} = 41.46$ ✓

„ „ $\frac{S_1}{L} = 78.57$ ✓

„ „ $\frac{E}{L} =$

Percentage from Table, Line A. Tanker **73.54** ✓

(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 = **36.40 × 73.54 = 26.77** ✓

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P. ...	41.6	1			33	33 ✓	1
$\frac{1}{4}L$ from A.P. ...		4			16 ✓	16 ✓	4
$\frac{2}{4}L$ „ ...		2			7 ✓	7 ✓	2
Amidships ...		4					4
$\frac{3}{4}L$ from F.P. ...		2			1.61	1.61	2
$\frac{1}{4}L$ „ ...		4			6.50	6.50	4
F.P. ...		1			14.61	14.61	1
Total ...				374.40			154.83

Mean actual sheer aft =

Mean standard sheer aft =

Mean actual sheer forward =

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

„ „ aft of „ =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{219.57}{18} (.75 - .2073) = +6.62$ ✓

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.	Deduction for Fresh Water.	TANKER
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	TABULAR FREEBOARD corrected for Flush Deck (if required) 44.30 ✓
Depth to Freeboard Deck = 17.54 ✓	$\Delta =$	Correction for coefficient 1.36
Summer freeboard = 1.54 ✓	Tons per inch immersion at summer load water line	$\frac{.77 + .68}{1.36} = 1.45/1.36$
Moulded draught (d) = 16.00 ✓	T =	
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40 T}$ inches	
Winter freeboard = $\frac{d}{4}$ inches =		
Addition for Winter North Atlantic Freeboard (if required) =		

Depth Correction ... **8.58** ✓

Deduction for superstructures ... **26.77** ✓

Sheer correction ... **6.62** ✓

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

6.62 **35.35** **1-28.73** ✓

Summer Freeboard = **18.50** ✓

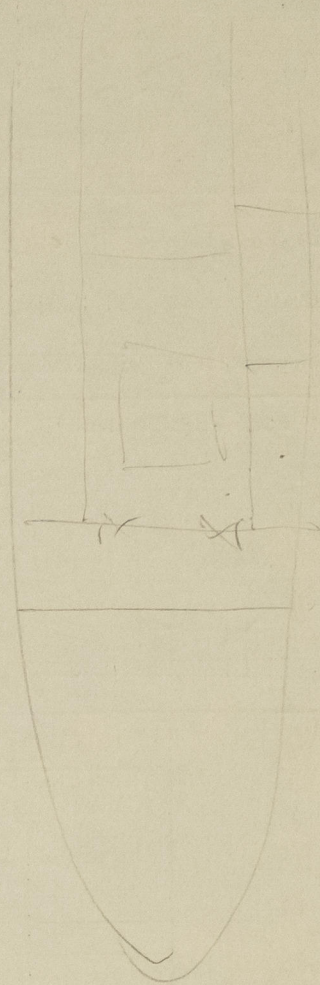
1-6 1/2 ✓

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

Tropical Fresh Water Line above Centre of Disc	...	Tropical Fresh Water Freeboard	...
Fresh Water Line	...	Fresh Water	...
Tropical Line	...	Tropical	...
Winter Line below	...	Winter	...
Winter North Atlantic Line	...	Winter North Atlantic	...

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.

Trunk $13 \times 37.5/46 = 10.60 \checkmark$
 $140 \times 29/46 = 88.26 \checkmark$
 $32 \times 26.5/46 = 18.44 \checkmark$
 $\frac{10.60}{13.1} = 117.30 \checkmark$



Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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