

13 APR 1942

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

WINNAR

Ship's Name "CONGONIAN"	Official Number NOT ASSIGNED YET 168816	Nationality and Port of Registry BRITISH LIVERPOOL. HONG KONG	Gross Tonnage NOT ASSIGNED YET. 6082	Date of Build 1942.	Port of Survey NEWCASTLE-ON-TYNE
Moulded Dimensions: Length 410'-8 1/4" To centre of rudder stock.				Breadth 56'-6"	Depth 29'-7" To UPPER DECK.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12323 tons				Date of Survey DURING CONSTRUCTION	
Coefficient of fineness for use with Tables .739 .745				Surveyor's Signature K. Little	
				Particulars of Classification 100 A.1. CARRYING PETROLEUM IN BULK. (CLASS CONTEMPLATED)	

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 29'-58"	(a) Where D is greater than Table depth (D - Table depth) R = (29.63 - 27.38) x 3 = + 6.75	Moulded Breadth (B) 56'-5"
Stringer plate05	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 2.25	Standard Round of Beam = $\frac{B \times 12}{50} =$ 13'-5.6"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 13'-5"
Depth for Freeboard (D) = 29'-63"		Difference .06
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.06}{4} \times .237 = \text{Nil.}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)	
Poop enclosed (incl. 7'-0")	160'-04"	156'-55"	7'-5"		156'-55"	Standard Height of Superstructure 7'-5"
„ overhang ...	—	—	—	—	—	„ „ R.Q.D. ✓
R.Q.D. enclosed	—	—	—	—	—	Deduction for complete superstructure 42'-00"
„ overhang	—	—	—	—	—	Percentage covered $\frac{S}{L} =$ 57.90
Bridge enclosed...	—	—	—	—	—	„ „ $\frac{S_1}{L} =$ 76.30
„ overhang aft	—	—	—	—	—	„ „ $\frac{E}{L} =$ 70.75
„ overhang forward	—	—	—	—	—	Percentage from Table, Line Tanker 70.75
F'cle enclosed	53'-12"	53'-12"	7'-5"		53'-12"	(corrected for absence of forecastle (if required)) ✓
„ overhang	—	—	—	—	—	Percentage from Table, Line B.
Trunk aft 195'-25" x 30.7	195'-25"	103'-67"	7'-5"		103'-67"	(corrected for absence of forecastle (if required)) ✓
„ forward 56'-5"	SEE SKETCH	—	—	—	—	Interpolation for bridge less than 2L (if required) ✓
Tonnage opening aft	—	—	—	—	—	Deduction = 42 x 70.75 = -29.72"
„ „ forward	—	—	—	—	—	
Total	213'-16"	313'-34"			313'-34"	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	51'-07"	1	✓	51'-07"	51"	51'-0"	1	✓	51'-0"	Mean actual sheer aft =
1/4 L from A.P. ...	22'-72"	4	✓	90'-90"	22 1/2"	22'-5"	4	✓	90'-0"	Mean standard sheer aft =
3/4 L „	5'-61"	2	✓	11'-23"	5 1/2"	5'-5"	2	✓	11'-0"	Mean actual sheer forward =
Amidships	—	4	—	—	—	—	4	—	—	Mean standard sheer forward =
3/4 L from F.P. ...	11'-23"	2	✓	22'-46"	12"	12'-0"	2	✓	24'-0"	Length of enclosed superstructure forward of amidships =
1/4 L „	45'-45"	4	✓	181'-80"	45"	45'-0"	4	✓	180'-0"	„ „ aft of „ =
F.P. ...	102'-14"	1	✓	102'-14"	102"	102'-0"	1	✓	102'-0"	
Total	459'-60"	✓	459'-60"				✓	458'-0"		

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{1.60}{18} (.75 - \frac{.2595}{.4905}) = +.04"$

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 corrected for Fresh Deck (if required)	65'-07"
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.739 + .68}{1.36} = \frac{1.419}{1.36}$	67'-90"
Depth to Freeboard Deck = 29'-63"	$\Delta =$ 12800	Depth Correction ... 6.75	
Summer freeboard = 375	Tons per inch immersion at summer load water line	Deduction for superstructures ... 29.72	
Moulded draught (d) = 25'-88"	T = 45.65	Sheer correction04	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6'-47"-6 1/2"	Deduction = $\frac{\Delta}{40 T}$ inches = 7.01	Round of Beam correction ...	
Addition for Winter North Atlantic Freeboard (if required) = 6'-47" + 4'-11" = 10'-58" = 10 1/2"	= 7"	Correction for Thickness of Deck amidships	
		Other corrections, scantlings, etc. ...	
		Summer Freeboard = 44'-97"	

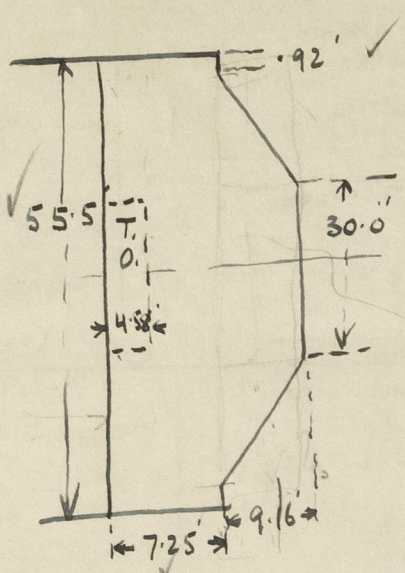
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Steel, Deck:

Tropical Fresh Water Line above Centre of Disc	13 1/2"
Fresh Water Line	7"
Tropical Line	6 1/2"
Winter Line below	6 1/2"
Winter North Atlantic Line	10 1/2"

Tropical Fresh Water Freeboard	2'-7 1/2"
Fresh Water	3'-2 1/2"
Tropical	3'-2 1/2"
Winter	4'-3 1/2"
Winter North Atlantic	4'-7 1/2"

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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.



allowance for extension
of poop part

$$\frac{9.16}{55.5} \times \frac{53.66 + 30.0}{2} = 6.90 \checkmark$$

length poop without extension = $145.20 \checkmark$
 $5.75 \checkmark$
 $1.50 \checkmark$
 $.69 \checkmark$
 $153.14 \checkmark$
 $6.90 \checkmark$
 $160.04 \checkmark$

equivalent length with extension

Poop enclosed = $153.14 - 7.25 = 145.89 \checkmark$
 Equivalent bridge forward = $7.25 + 6.90 - 4.58 \checkmark$
 $= 9.57 \checkmark$
 $9.57 \times .75 = 7.18 \checkmark$
 $153.07 \checkmark$
 $160.04 \checkmark$
 $2 \times 6.97 \checkmark$
 $3.48 \checkmark$
 $153.07 \checkmark$
 $156.55 \checkmark$ equivalent

Trade of ship OCEAN GOING

Names of sister ships —

Builder's name and yard number MESSRS SWAN HUNTER & WIGHAM RICHARDSON LTD. WALKER-ON-TYNE No 1708.

Owners THE UNITED AFRICA. CO. LTD.

Fee £



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