

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

30155

No 30854

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Raised Quarter Deck and ForecastlePort of Survey Sunderland

(Type of Superstructures.)

Date of Survey March 7th 1932

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>"CHARTERED"</u> <u>Collier</u>	<u>British</u> <u>London</u>	<u>146,145</u>	<u>2,021</u>	<u>1921</u> <u>10 mo.</u>

Name of Surveyor John Bartlett

Moulded Dimensions: Length 269.73 Breadth 38.0 Depth 20.5
Moulded displacement at moulded draught = 85 per cent. of moulded depth 3,940 tons
Coefficient of fineness for use with Tables .7721

Particulars of Classification +100A1.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	... 20.5	(a) Where D is greater than Table depth (D-Table depth) R =	(20.55 - 17.98) 2.075 = + 5.33	Moulded Breadth (B)	38.0
Stringer plate	... .05	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	= 9.12
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$				Ship's Round of Beam	= 9.5
Depth for Freeboard (D) =	20.55	If restricted by superstructures		Difference	.38
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	= $\frac{.38}{4} \times \frac{.2884}{.8884} = -.03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
„ overhang ...	✓				
R.Q.D. enclosed ...	163.13	163.13	4' 9"	✓	163.13
„ overhang ...	2.25	1.12			1.12
Bridge enclosed ...	✓				
„ overhang aft ...	✓				
„ overhang forward ...	✓				
F'cle enclosed ...	25.37	25.37	7' 0"	✓	25.37
„ overhang ...	3.66	2.30			2.30
Trunk aft ...	✓				
„ forward ...	✓				
Tonnage opening aft ...	✓				
„ „ forward ...	✓				
Total ...	193.75	191.92			191.92

Standard Height of Superstructure 6.197„ „ R.Q.D. 4.263Deduction for complete superstructure 32.97Percentage covered $\frac{S}{L} = 71.82\%$ „ „ $\frac{S_1}{L} = 71.16\%$ „ „ $\frac{E}{L} = 71.16\%$

Percentage from Table, Line A.

(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 = $32.97 \times .6443 = -21.24$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	36.97	1		36.97	42	47.84	1		47.84
$\frac{1}{4}$ L from A.P. ...	16.45	4		65.80	20	21.29	4		85.16
$\frac{2}{4}$ L „ ...	4.07	2		8.14	5.4	5.26	2		10.52
Amidships ...	✓	4		✓	0	✓	4		✓
$\frac{3}{4}$ L from F.P. ...	8.14	2		16.28	10.4	9.16	2		18.32
$\frac{1}{4}$ L „ ...	32.90	4		131.60	37.8	36.63	4		146.58
F.P. ...	73.94	1		73.94	84	84.00	1		84.00
Total ...				332.73					392.26

Mean actual sheer aft = Excess
Mean standard sheer aftMean actual sheer forward = Excess
Mean standard sheer forwardLength of enclosed superstructure forward of amidships = .105L„ „ aft of „ = .5L

Star aft increased by virtue of intact R.Q.D. having a height in excess of standard.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{59.53}{18} (.75 - .3591) = -1.29$

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 = 25.30Summer freeboard = 6.56Moulded draught (d) = 18.74

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 4.68 = 4.4

Addition for Winter North Atlantic Freeboard (if

required = 2.0

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 4307$

Tons per inch immersion at summer load water line

 $T = 21.20$ Deduction = $\frac{\Delta}{40T}$ inches= $5.08 = 5$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.7721 + .68}{1.36} = \frac{1.452}{1.36}$

Depth Correction ... 5.33

Deduction for superstructures ... 21.24

Sheer correction ... 1.29

Round of Beam correction03

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ... 57.00

Summer Freeboard = 78.68

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

Tropical Fresh Water Line above Centre of Disc ... 9 $\frac{3}{4}$ Fresh Water Line „ „ ... 5 $\frac{1}{4}$ Tropical Line „ „ ... 4 $\frac{3}{4}$ Winter Line below „ „ ... 4 $\frac{3}{4}$ Winter North Atlantic Line „ „ ... 6 $\frac{3}{4}$

Tropical Fresh Water Freeboard ... 5' 9"

Fresh Water „ „ ... 6' 1 $\frac{3}{4}$

Tropical „ „ ... 6' 2"

Winter „ „ ... 6' 1 $\frac{1}{2}$ Winter North Atlantic „ „ ... 7' 1 $\frac{1}{2}$ MARKING FORM
RECEIVED 14 SEP 1934MARKING FORM
RECEIVED 16 SEP

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	...	...	No. 1 in Well.	No. 2 in Well.	No. 3 on R.Q.D.	No. 4 on R.Q.D.				
Dimensions of Hatchway	...	...	23'-6" x 24'-4"	41'-1 1/2" x 25'-9 3/4"	31'-4" x 26'-0"	31'-4" x 26'-0"				
COAMINGS	Height above Deck	...	42"	42"	42"	42"				
	Thickness	{ Sides	.50	.50	.50	.50				
		{ Ends	.44	.44	.44	.44				
	Stiffeners	...	7 x 3 x 4 1/2	7 x 3 x 4 1/2	7 x 3 x 4 1/2	7 x 3 x 4 1/2				
	Brackets, Stays	...	2 1/2" Rds. 8' apart	2 1/2" Rds. 8' apart	2 1/2" Rds. 8' apart	2 1/2" Rds. 8' apart				
HATCH BEAMS	Number	...	4	7	5	5				
	Spacing	...	4'-6 1/2"	5'-1 1/2"						
	Scantling and Sketch	...	11 1/4 x 3 x 40 24 x 40	11 1/4 x 3 x 44 26 x 40	As for No. 2	As for No. 2				
	Bearing Surface	...	1 1/2 x 3 x 50 P.O.	1 1/2 x 3 x 50 P.O.	No. 2	No. 2				
FORE AND AFTERS	Number	...								
	Spacing	...								
	Unsupported Lengths	...								
	Scantling* and Sketch	...								
	Bearing Surface	...								
HATCH COVERS	Material	...	B. Pine	B. Pine	B. Pine	B. Pine				
	Thickness	...	3"	3"	3"	3"				
	How fitted	...	For aft	For aft	For aft	For aft				
	Bearing Surface	...	3"	3"	3"	3"				
Spacing of Cleats	...	...	24"	24"	24"	24"				
Number of Tarpaulins	...	...	2	2	2	2				
<p>*Are wood fore and afters steel shod at all bearing surfaces? Yes</p> <p>Are battens and wedges efficient and in good condition? Yes</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? Yes</p> <p>Are lashings provided in accordance with rule requirements? Yes</p> <p>Bunkers Hatch on Machinery Casing 21' x 5' 8" 9" B.Q. Coaming 3" Cove 2 1/2" Bearing Surface.</p> <p>2 Flush Hatches in passageway under forecastle 22' x 20" & 36' x 27" with 3" coaming covers flush with sheathing in passage.</p> <p>One skylight in R.Q.D. 25" plate, wood top with bullseyes. Skylight 45" x 24".</p>										

Particulars of fiddle, funnel and ventilator coamings:—

Stowhold gratings covered by strong steel lugged covers. ✓
 Fiddle and funnel ventilators in efficient condition ✓
 Engine skylight of steel, strongly constructed. ✓

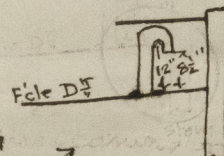
Particulars of Flush Bunker Scuttles:— One on raised deck between hatch in well and two " " " " on R.Q.D. each 18" screw scuttle of cast steel.

Particulars of Companionways:—

None. ✓

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

1. Goose-neck Vent. on Forecastle deck 5" dia. as per sketch. ✓
 1 Vent. on Forecastle deck 12" dia., coaming 36 x 30 to hold 48 x 30 " "
 1 " in Well 12" " " 36 x 30 " "
 2 " on R.Q. deck 12" " " 36 x 30 " "
 5 " " " " 6" " " 36 x 30 " accommodation



all Ventilators constructed in accordance with Rules, and coamings closed with wood plugs or canvas covers. ✓

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

1. Goose-neck on Forecastle deck 5" dia. to Fore Peak, as per sketch
 2. 2" air pipes in well 36" high from double bottom tank
 1. 2" " " " 102" from deck level to Deep Tank.
 2. 4 1/2" " " on R.Q.D. 58" high to Deep Tank
 3. 2" air pipes " " 30" high from Double bottom
 1. 6" " " " from A. Peak. 24" high, 18" to lip.

all air pipes closed with wood plugs, no snugging holes. Heights given to lip.

Particulars of Gangway Cargo and Coaling Ports:—

None. ✓



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Chartered Carrier

Particulars of Scuppers and Sanitary Discharge Pipes —

from W.C.'s aft through steel below freeboard deck. Two 4 in sanitary discharge fitted with gunmetal storm-value at ship's side and efficient trap.

Particulars of Side Scuttles:

all side scuttles below freeboard deck fitted with hinged deadlights. side scuttles to crew space in fore-castle fitted with hinged deadlights. all scuttles of substantial construction.

Particulars of Guard Rails:—

Guard rails on fore-castle 39" high, with two rods and stanchions 4' 9" apart.

Particulars of Gangways, Lifelines, etc.:—

~~None fitted.~~

Provision made for rigging lifelines which are available for use in any part of the ship which might have to be used by the crew in the regular working of the ship.

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ... R. Q. D. ...	163.13 154.0	45"	3'-0" x 1'-6"	7	31.5.	32.63 ϕ
Forward Well ...	76.25.	48"	3'-0" x 1'-6"	4.	18.0. ϕ	15.25 ϕ

State position of each freeing port ... { After Well: — R. Q. D. from forward to aft of port: — 15.10", 40.0", 63.0", 81.5", 104.0", side house — 8.9" 22.0",
(F. and A. position and height above deck edge) { Forward Well: — from forward to aft of port: — 19.8", 27.6", 46.0", 60.9"
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Forward port 2 rails 7" apart. Remf. 30 plate shutter on inner bar.
Additional area where sheer is less than standard. 11' of well in well 14' in on R. Q. D. 10m.

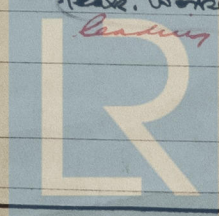
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	✓	✓	✓					
Raised Quarter Deck Bulkhead ...	.36	.36	5" x 3" x 40L	48" x 42" ✓	Snugs.	None ✓	✓	
Bridge, After Bulkhead ...	✓	✓	✓					
Bridge, Forward Bulkhead ...	✓	✓	✓					
Fore-castle Bulkhead ...	.30	.30	3 1/2" x 3" x 30.	36 x 39"	None ✓	5'-0" x 2'-6" ✓	15" ✓	
Trunk, Aft ...	✓	✓	✓					
Trunk, Forward ...	✓	✓	✓					
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓	.32	3 x 3 x 34	31" x 34"	Plates at top	6.4' 6" x 2.3' 6" 1.5' 0" x 2.3' ✓	18" ✓	7'-0" ✓
Exposed Machinery Casings on Super-structure Decks ...	✓	✓	✓					
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓	✓	✓					
Deckhouses on Flush Deck Ships ...	✓	✓	✓					

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead ...	✓
Raised Quarter Deck Bulkhead ...	No openings ✓
Bridge, After Bulkhead ...	✓
Bridge, Forward Bulkhead ...	2" hard
Fore-castle Bulkhead ...	14 1/2" thick with 3/4" framing
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	Wood door (handed) works from both sides
Exposed Machinery Casings on Super-structure Decks ...	6.25 hinged steel doors, work from both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	left door stand side wood (handed) (2) doors. Worked from both sides. Leading to cargo hold accommodation
Deckhouses on Flush Deck Ships ...	✓

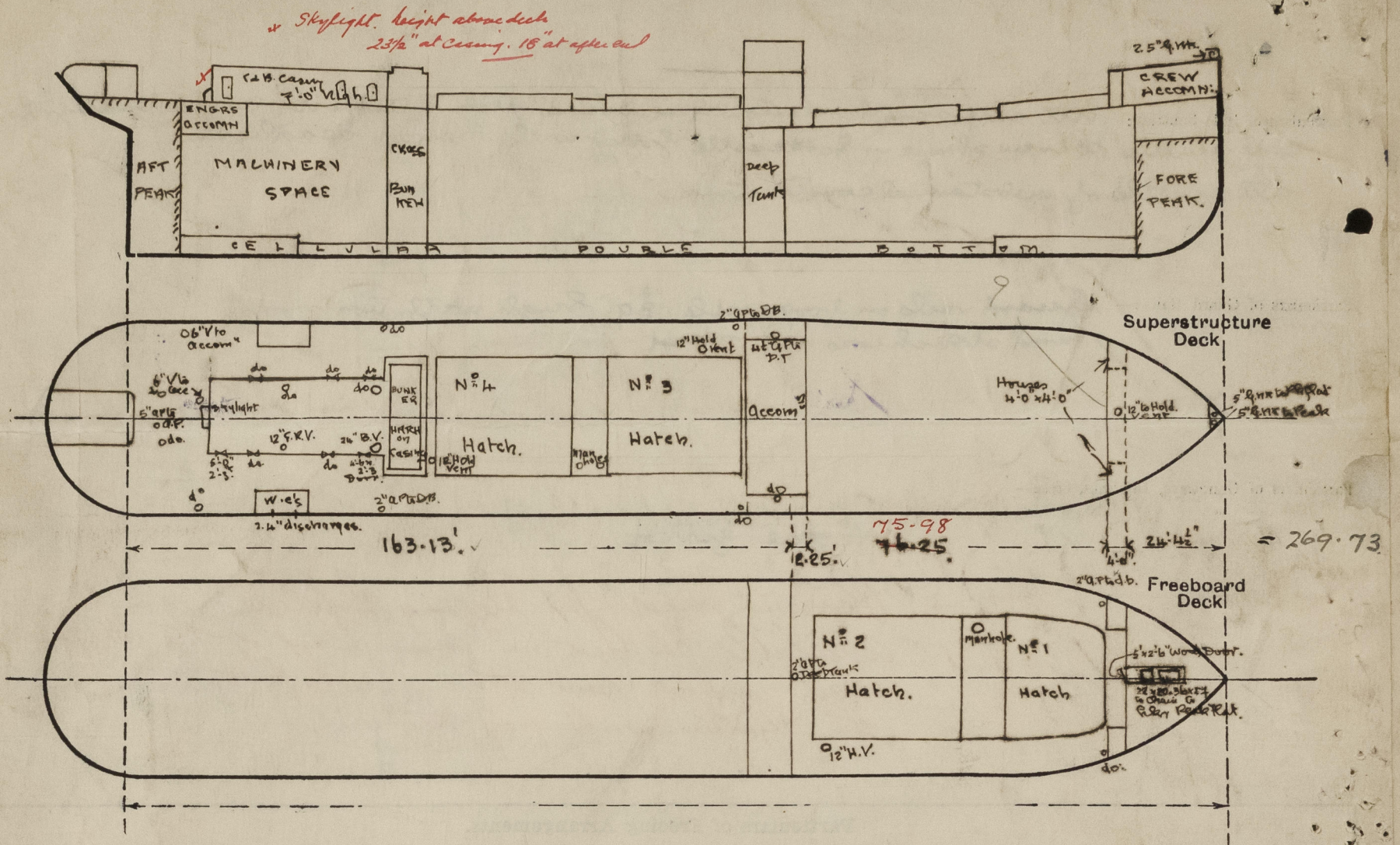
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Chartered Collier

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



Actual displacement at actual draught of $18' - 7\frac{1}{2}" = 4,235$ tons.

T.P.S. " " " " " = 21.16.

The sheers of the raised quarter deck are the same as those given for the upper deck.

State any special features in the construction of the ship:—

Vessel now examined in drydock.

Fore castle 24.375
 S. House 444 1.000
 Equipt. 16 25.375

Δ @ Ext Draught

M. Draught. = 18.74
 18.91

18.91
 18.625
 285 x 12 = 3.42

Δ @ 18.91 = 4235
 72
 4307

Builder's name and yard number G. Crown & Sons Ltd: No 167.

Names of sister ships S. S. "BORDE".

Owners Gas Light & Coke Co. (Stephenson Clarke)

Fee £ 10 : 4 : 0 Received by me [Signature]