

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

No 102224

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey	AMLRCH.
having RAISED QUARTERDECK, BRIDGE & FORECASTLE					Date of Survey	22-5-33.
(Type of Superstructures.)					Name of Surveyor	J. Stelman
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification	
DUNLEITH.	BRITISH. BEAUMARIS.	102023.	292.	1896. 9mo.	* 100A1.	
Moulded Dimensions: Length 140'-0". Breadth 21'-12". Depth 10'-6".						
Moulded displacement at moulded draught = 85 per cent. of moulded depth 524 tons						
Coefficient of fineness for use with Tables 695						

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	10'-6"	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	21'-12"
Stringer plate	44"	(10.54-9.33) 1.077 = + 1.30"		Standard Round of Beam = $\frac{B \times 12}{50}$	5.07"
Sheathing on exposed deck	04"	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	6"
$T \left(\frac{L-S}{L} \right) =$				Difference	.93"
Depth for Freeboard (D) =	10.54	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	= $\frac{.93}{4} \times .4381 = -.10"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure 6.00
" overhang ...						" " R.Q.D. 3.267
R.Q.D. enclosed ...	45'-6"	45.50	3'-9"	✓	45.50	Deduction for complete superstructure 20.00
" overhang ...						Percentage covered $\frac{S}{L} = 56.19\%$
Bridge enclosed ...	7'-0"	7.00	6'-9"	✓	7.00	" " $\frac{S_1}{L} = 56.19\%$
" overhang aft ...						" " $\frac{E}{L} = 53.86\%$
" overhang forward ...						Percentage from Table, Line A. 37.40%
F'cle enclosed ...	26'-2"	26.17	5'-0"	✓	22.90	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B.
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = $20 \times 374 = - 748"$
" " forward ...						
Total ...	78.67	78.67			75.40	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft	Mean standard sheer aft
A.P. ...	24.00	1		24.00	12.	12.00	1		12.00	Deficient	
$\frac{1}{4}$ L from A.P. ...	10.68	4		42.72	3.95	3.00	4		12.00	Mean actual sheer forward	Mean standard sheer forward
$\frac{3}{4}$ L " ...	2.64	2		5.28	1.0.	-1.00	2		-2.00	Deficient	
Amidships ...		4					4			Length of enclosed superstructure forward of amidships =	
$\frac{3}{4}$ L from F.P. ...	5.28	2		10.56	4.73	7.00	2		14.00	" " aft of " =	
$\frac{1}{4}$ L " ...	21.36	4		85.44	18.96	20.00	4		80.00		
F.P. ...	48.00	1		48.00	39.0.	39.00	1		39.00		
Total ...				216.00					155.00		

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{61.00}{18} \left(.75 - \frac{281}{469} \right) = + 1.59"$

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.	TABULAR FREEBOARD	14.20 ✓
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	14.36 ✓
Depth to Freeboard Deck = Ft. 10.54	$\Delta =$	Depth Correction ...	1.30 -
Summer freeboard = .81	Tons per inch immersion at summer load water line	Deduction for superstructures ...	- 7.48
Moulded draught (d) = 9.73	T =	Sheer correction ...	1.59 -
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 2.2"	Deduction = $\frac{\Delta}{40T}$ inches = 2.2"	Round of Beam correction ...	- .10
Addition for Winter North Atlantic Freeboard (if required) = 2"		Correction for Thickness of Deck amidships ...	-
		Other corrections, scantlings, etc. ...	-
		2.89 7.58 -4.69 ✓	
		Summer Freeboard = 9.67 ✓	

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 " " ...

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS						
Description of Hatchway	N° 1.	N° 2			BUNKER.	
Dimensions of Hatchway	12'-0" x 10'-0"	22'-0" x 10'-0"			5'-0" x 12'-2"	
COAMINGS	Height above Deck ... 21" Thickness { Sides ... 44" { Ends ... 40" Stiffeners ... None. Brackets, Stays ... None.	Height above Deck ... 4'-3" Thickness { Sides ... 44" { Ends ... 40" Stiffeners ... None. Brackets, Stays ... None.			3'-0" above fiddle. 30. 30.	
HATCH BEAMS	Number ... one Spacing ... 6'-0" Scantling and Sketch ... Bearing Surface ... 3"	Number ... one Spacing ... 11'-0" Scantling and Sketch ... Bearing Surface ... 3 1/2"			None	
FORE AND AFTERS	Number ... one Spacing ... 5'-0" Unsupported Lengths ... 6'-0" Scantling* and Sketch ... Bearing Surface ... 3"	Number ... one Spacing ... 5'-0" Unsupported Lengths ... 11'-0" Scantling* and Sketch ... Bearing Surface ... 3"			None	
HATCH COVERS	Material ... W.P. Thickness ... 3" How fitted ... Atthwat. Bearing Surface ... 2"	Material ... W.P. Thickness ... 3" How fitted ... Atthwat. Bearing Surface ... 2 1/2"			W.P. 2" F.A. 2 1/2"	
Spacing of Cleats	24"	30"			24"	
Number of Tarpaulins	2	2			one	
*Are wood fore and afters steel shod at all bearing surfaces? Yes. Are battens and wedges efficient and in good condition? Yes. Are tarpaulins in good condition and in accordance with rule requirements? Yes. Are lashings provided in accordance with rule requirements? Yes.						

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle, Funnel & Ventilator coamings are in good condition.
 Engine Room skylight good.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

None.

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

Fistle Head. one 12" high, 23" Dia. 25 T. to Fistle accom.
 Fore Well. two. 25" high 9" Dia. 32 T. to Hold.

Wood Plugs & CANVAS COVERS
 ON BOARDS AND ALL VENTS.

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

Fistle Head. one 6" high. 3" dia to Fore Peak.

canvass cover provided

Particulars of Gangway Cargo and Coaling Ports:—

None.



Particulars of Scuppers and Sanitary Discharge Pipes :—

One Sanitary pipe Port side in forecstle space. fitted with storm valve discharging 2'-6" below level of main deck.

Particulars of Side Scuttles :—

6" dia with dead lights in forecstle.

Particulars of Guard Rails :—

Fore head. 3'-0" high 4'-0" apart. 2 rods.
Fore Well. Bulwarks 3'-10" high.
R.Q.O. Bulwarks. 3'-3" high.

Particulars of Gangways, Lifelines, etc. :—

Steel wire lifeline fitted in fore well.

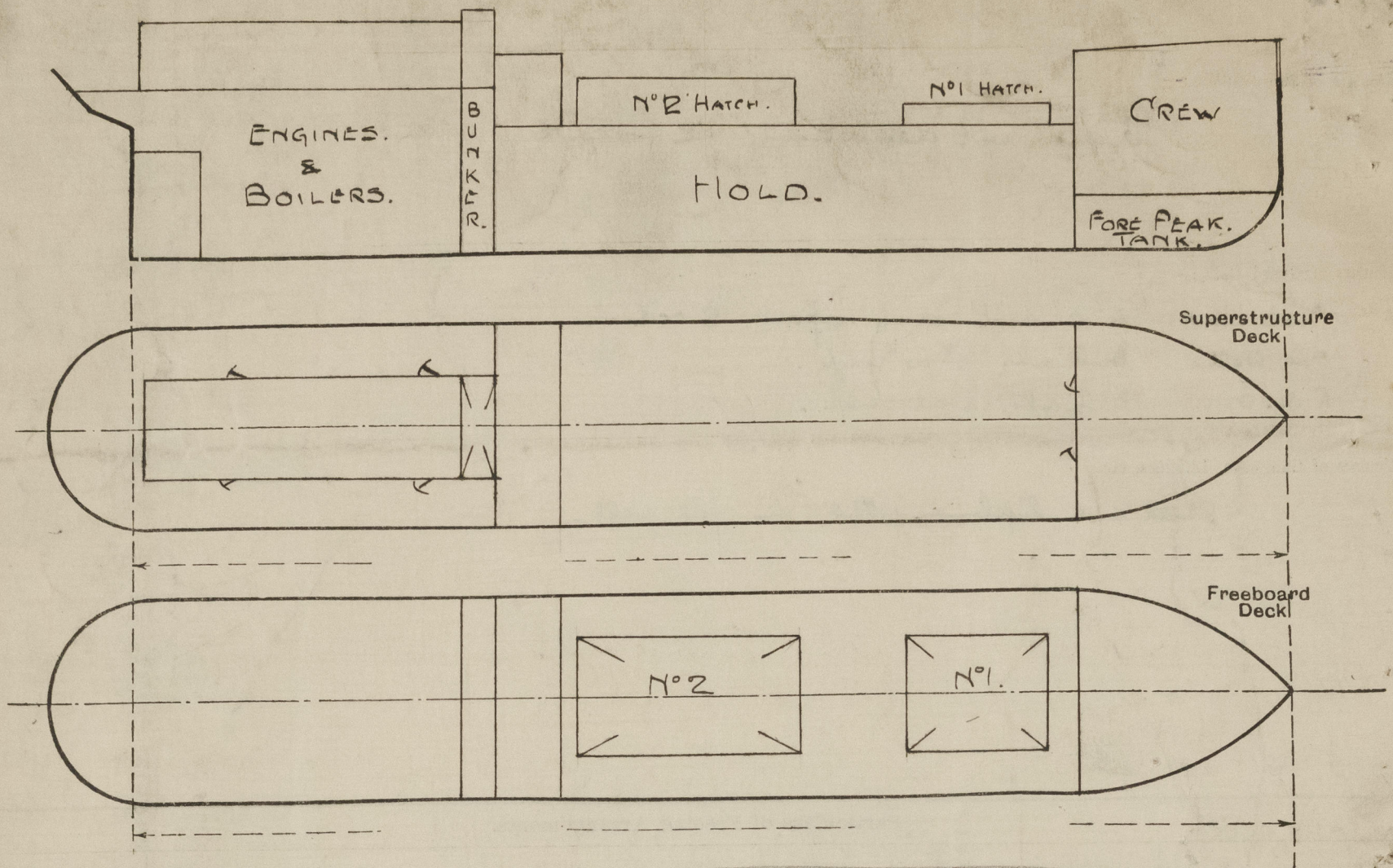
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	45'-6"	3'-3"	30" x 18"	2.3	11.25 7.5 sq ft.	11-0.9 ft.
Forward Well	61'-4"	3'-10"	30" x 18"	3	11.25 sq ft.	12.6 13-0 sq ft.
State position of each freeing port } After Well: 13'-2" — 13'-0" — 13'-0" — Bdr. (F. and A. position and height above deck edge) } Forward Well: Bdr. — 2'-2" — 22'-9" — 16'-8" — Bdr. State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :— Additional area where sheer is less than standard.						
All shutters except aft. ports in Fore Well which are fitted with 2 bars.						

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 ...	✓	.38.	3" x 2 1/2" x .38.	30"	Bkts at bottom	None	✓	3'-9"
Bridge, After Bulkhead	✓	.38.	3" x 2 1/2" x .38.	30"	Bkts at bottom	None	✓	3'-0"
Bridge, Forward Bulkhead ... ..	.44.	.40.	3" x 2 1/2" x .38.	30"	None	None	✓	6'-9"
Forecastle Bulkhead ... ..	.38.	.30.	3" x 2 1/2" x .38.	30"	None	3'-3" x 23"	14"	5'-0"
Trunk, Aft	—							
Trunk, Forward	—							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	.38.	.30.	2 1/2" x 2 1/2" x .25.	36"	Bkts at top	4'-8" x 2'-0"	20"	6'-7"
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 ...	None, no openings
Bridge, After Bulkhead	None, no openings
Bridge, Forward Bulkhead	None, no openings
Forecastle Bulkhead	Steel hinged doors
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	Steel hinged doors.
Exposed Machinery Casings on Super-structure Decks	—
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	—
Deckhouses on Flush Deck Ships ...	—

Dunleith.

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 shown on the following sketches:—



446 tons extreme at 8.28 act

at 8.92 mld (9.38 act) $\Delta \text{act} = 446 + (1.1 \times 12 \times 6.1)$

$= \frac{811}{527} = 529 \text{ mld.}$

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

None.

Builder's name and yard number

J. FULLERTON & CO

N° 133.

Names of sister ships

Owners

W. THOMAS & SONS

Fee £

3 : 8 : 0.

Received by me

Travelling expenses.

£ 1 - 10 - 0.



© 2020

Lloyd's Register
Foundation