

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~
having a poop, bridge and forecastle.

Port of Survey _____

Date of Survey 9.12.35

Name of Surveyor _____

Particulars of Classification +100 A1
Carrying petroleum in bulk
(Contaminated).

Ship's Name Lithgow N° 886.

Nationality and Port of Registry _____

Gross Tonnage _____

Date of Build _____

Moulded Dimensions: Length 465.08 Breadth 61.50 Depth 34.00

Moulded displacement at moulded draught = 85 per cent. of moulded depth 18286 tons

Coefficient of fineness for use with Tables .774

Depth for Freeboard (D) 34.00

Moulded depth 34.00

Stringer plate07

Sheathing on exposed deck ✓

$T \left(\frac{L-S}{L} \right) =$ _____

Depth for Freeboard (D) = 34.07

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = 3.06
 $(34.07 - 31.01) \times 3 = + 9.18$

(b) Where D is less than Table depth (if allowed)
(Table depth - D) R = _____

If restricted by superstructures _____

Round of Beam correction

Moulded Breadth (B) 61.5

Standard Round of Beam = $\frac{B \times 12}{50} = 14.76$

Ship's Round of Beam = 15.50

Difference 74

Restricted to _____

Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{74^2}{4} \times \frac{59.33}{465.08} = -11.11$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	101.83	101.83	8.0	-	101.83
" overhang	3.50	1.75			1.75
R.Q.D. enclosed					
" overhang					
Bridge enclosed... ..	36.00	36.00	8.0	✓	36.00
" overhang aft	3.00	2.25			2.25
" overhang forward	3.50	1.75			1.75
Fore enclosed	53.69	45.55	8.0	✓	45.55
" overhang		9			9
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	201.52	189.13			189.13

Standard Height of Superstructure 7.5

" " R.Q.D. _____

Deduction for complete superstructure 42

Percentage covered $\frac{S}{L} = 43.33$

" " $\frac{S_1}{L} = 40.68$

" " $\frac{E}{L} = 40.68$

Percentage from Table, Line A. Tanker 31.68
(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 = $42 \times 31.68 = -13.30$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	56.51	1		56.51	51.00	56.51	1		56.51
$\frac{1}{2}$ L from A.P.	25.185	4		100.66	26.66	25.185	4		100.66
$\frac{3}{4}$ L "	6.22	2		12.44	6.66	6.22	2		12.44
Amidships	-	4		-	-	-	4		-
$\frac{3}{4}$ L from F.P.	12.44	2		24.88	11.33	11.33	2		22.66
$\frac{1}{2}$ L "	50.33	4		201.32	45.33	45.33	4		181.32
F.P.	113.42	1		113.42	102.00	102.00	1		102.00
Total				508.53					475.49

Mean actual sheer aft = Sum

Mean standard sheer aft = _____

Mean actual sheer forward = Deficient (90.222 standard)

Mean standard sheer forward = _____

Length of enclosed superstructure forward of amidships = _____

" " aft of " = _____

Sheer aft

Standard	Actual	Standard	Actual
56.51	51.00	12.44	11.33
25.185	26.66	50.33	45.33
6.22	6.66	113.42	102.00
	150.680		150.96

Sheer forward

Standard	Actual	Standard	Actual
56.51	51.00	12.44	11.33
25.185	26.66	50.33	45.33
6.22	6.66	113.42	102.00
	150.680		150.96

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{33.34}{18} \left(.75 - \frac{2166}{5334} \right) = +.998$

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 = 34.07

Summer freeboard = 6.77

Moulded draught (d) = 27.30

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.82 = 6 $\frac{3}{4}$

Addition for Winter North Atlantic Freeboard (if required) = 6.82 + 4.65 = 11.47 = 11 $\frac{1}{2}$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

T =

Deduction = $\frac{\Delta}{40T}$ inches

6 $\frac{3}{4}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	9.18	
Deduction for superstructures	-	13.30
Sheer correction	0.99	
Round of Beam correction	-	0.11
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	10.17	13.41

Summer Freeboard = 81.20

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

Tropical Fresh Water Line above Centre of Disc	43 $\frac{1}{2}$
Fresh Water Line " "	6 $\frac{3}{4}$
Tropical Line " "	6 $\frac{3}{4}$
Winter Line below " "	6 $\frac{3}{4}$
Winter North Atlantic Line " "	11 $\frac{1}{2}$

Tropical Fresh Water Freeboard	5 $\frac{1}{2}$
Fresh Water " "	6 $\frac{3}{4}$
Tropical " "	6 $\frac{3}{4}$
Winter " "	7 $\frac{1}{4}$
Winter North Atlantic " "	7 $\frac{1}{4}$

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	{	Height above Deck	...	...	...	...	...	...	...
		Thickness	...	...	...	...	...	...	...
		Sides	...	...	...	...	...	...	...
		Ends	...	...	...	...	...	...	...
HATCH BEAMS	{	Stiffeners	...	...	...	...	...	...	...
		Brackets, Stays	...	...	...	...	...	...	...
		Number	...	...	...	...	...	...	...
		Spacing	...	...	...	...	...	...	...
FORE AND AFTERS	{	Scantling and Sketch	...	...	...	...	...	...	...
		Bearing Surface	...	...	...	...	...	...	...
		Number	...	...	...	...	...	...	...
		Spacing	...	...	...	...	...	...	...
HATCH COVERS	{	Unsupported Lengths	...	...	...	...	...	...	...
		Scantling* and Sketch	...	...	...	...	...	...	...
		Bearing Surface	...	...	...	...	...	...	...
		Material	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...

*Are wood fore and afters steel shod at all bearing surfaces?
 Are battens and wedges efficient and in good condition?
 Are tarpaulins in good condition and in accordance with rule requirements?
 Are lashings provided in accordance with rule requirements?

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles :—

Particulars of Companionways :—

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

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

Particulars of Gangway Cargo and Coaling Ports :—

Particulars of Scuppers and Sanitary Discharge Pipes :—

Particulars of Side Scuttles :—

Particulars of Guard Rails :—

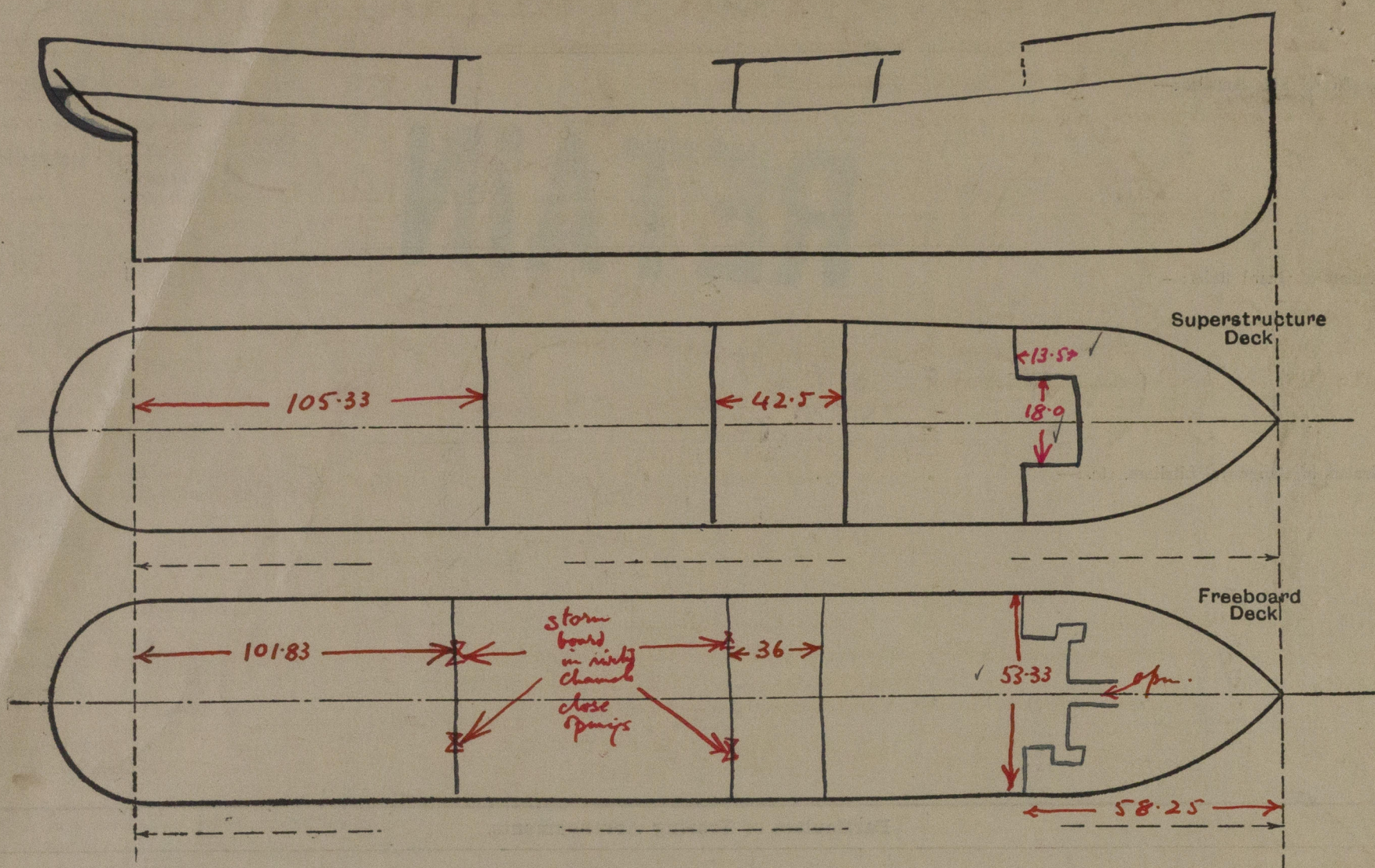
Particulars of Gangways, Lifelines, etc. :—

RETAIN

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
Forward Well
State position of each freeing port ... { After Well :— (F. and A. position and height above deck edge) { Forward Well :— 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.						

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
Bridge, After Bulkhead
Bridge, Forward Bulkhead
Forecastle Bulkhead
Trunk, Aft
Trunk, Forward
Exposed Machinery Casings on Freeboard or Raised Quarter Decks
Exposed Machinery Casings on Superstructure 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
Bridge, After Bulkhead
Bridge, Forward Bulkhead
Forecastle Bulkhead
Exposed Machinery Casings on Freeboard or Raised Quarter Decks
Exposed Machinery Casings on Superstructure Decks
Machinery Casings within Superstructures not fitted with Class I Closing Appliances
Deckhouses on Flush Deck Ships

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 :—



Forecastle

$$\text{opening } \frac{13.5 \times 18.0}{53.33} = - \frac{58.25}{53.69} \text{ equivalent}$$

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

Builder's name and yard number.....

Names of sister ships.....

Owners.....

Fee £.....

Received by me.....



© 2020

Lloyd's Register
Foundation