

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **27695**
(For London Office only.)

5 DEC 1932

W127

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Shelter deck without openings - poop & forecastle on shelter deck - cruiser stern.*

(Type of Superstructures.)

Port of Survey **Bombay.**

Date of Survey **November 9th 1932**

Name of Surveyor **J. B. Southwell**

Ship's Name **NUDDEA.** Nationality and Port of Registry **Glasgow, British.** Official Number **141908** Gross Tonnage **7928** Date of Build **1919-6.**

Moulded Dimensions: Length **449.5** Breadth **58** Depth **32.0** to main deck.

Moulded displacement at moulded draught = 85 per cent. of moulded depth **76,050** 19300 ✓ tons

Coefficient of fineness for use with Tables **735** 762 ✓

Particulars of Classification **+100 A1.**
Shelter deck with freeboard.
S.S. Cal. No. 3-7.31.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	32.0	(a) Where D is greater than Table depth (D-Table depth) R = $(40.05 - 29.96) 3$ +30.27		Moulded Breadth (B)	58
Stringer plate	6" .05	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓		Standard Round of Beam = $\frac{B \times 12}{50}$	13.92
Sheathing on exposed deck	None			Ship's Round of Beam	12.25
$T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures ✓		Difference	-1.67 1.92
Depth for Freeboard (D) =	32.05			Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	+4.35 = +40"

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	31	31.00	7.5		31.00
" overhang	✓				
R.Q.D. enclosed	✓				
" overhang	✓				
Bridge enclosed	✓				
" overhang aft	✓				
" overhang forward	✓				
Fore enclosed	43	43.00	7.5		43.00
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	74.00	74.00			74.00

Standard Height of Superstructure	7'6"
" " R.Q.D.	✓
Deduction for complete superstructure	42"
Percentage covered $\frac{S}{L} =$	16.46%
" $\frac{S_1}{L} =$	16.46%
" $\frac{E}{L} =$	16.46%
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	8.23%
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	$42.00 \times 0.0823 = -3.46$

SHEER CORRECTION. *Mean Standard Sheer = 27.48.*

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	54.95	1		54.95	56.5	60.00	1		60.00
$\frac{1}{4}L$ from A.P.	84.45	4		97.8	20.5	20.54	4		82.16
$\frac{2}{4}L$ "	6.04	2		12.08	5.5	5.13	2		10.26
Amidships		4					4		
$\frac{3}{4}L$ from F.P.	12.08	2		24.16	6.0	5.01	2		10.02
$\frac{1}{4}L$ "	48.91	4		195.64	20.5	20.04	4		80.16
F.P.	109.89	1		109.89	60.5	60.00	1		60.00
Total				494.4					302.60

Mean actual sheer aft = Deficient
Mean standard sheer aft = DeficientMean actual sheer forward = Deficient
Mean standard sheer forward = DeficientLength of enclosed superstructure forward of amidships = } Sheer
" " aft of " = } deficientCorrection = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{191.95}{18} (75 - 0.6823) = +7.12$

If limited on account of midship superstructure.

If limited to maximum allowance of $\frac{1}{4}$ ins. per 100 ft. ✓

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.

Depth to Freeboard Deck = 40.05

Summer freeboard = 11.04

Moulded draught (d) = 29.01 ✓

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 7.25 = 7 $\frac{1}{4}$ "

Addition for Winter North Atlantic Freeboard (if required) = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 16330$

Tons per inch immersion at summer load water line

T = 52.53

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

= 7.70

= 7 $\frac{3}{4}$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

104. 1442/1360

Depth Correction ... 3.27 ✓

Deduction for superstructures ... 3.46 ✓

Sheer correction ... 7.12 ✓

Round of Beam correction ... 4.40 ✓

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ... 5.94 ✓

Summer Freeboard = 132.50 ✓

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

Tropical Fresh Water Line above Centre of Disc	15"	Tropical Fresh Water Freeboard	9'-9 $\frac{1}{2}$ "
Fresh Water Line	7 $\frac{3}{4}$ "	Fresh Water	10'-4 $\frac{3}{4}$ "
Tropical Line	7 $\frac{1}{4}$ "	Tropical	10'-5 $\frac{1}{4}$ "
Winter Line below	7 $\frac{1}{4}$ "	Winter	11'-7 $\frac{1}{4}$ "
Winter North Atlantic Line		Winter North Atlantic	

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway		1	2	3	4	5	6	Bunker hatches			
Dimensions of Hatchway		23x18	30x18	24x18	18x18	30x18	27x18	64"x30"	54"x30"	60"wide	60"wide
COAMINGS	Height above Deck	30"	30"	30"	30"	30"	30"	18"	18"	33"	30"
	Thickness Sides	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"
	Thickness Ends	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"
	Stiffeners	7/8"x4" BA on ends & sides of all hatches						None.	None.	None.	None.
HATCH BEAMS	Brackets, Stays	None						None.	None.	None.	None.
	Number	4	6	5	3	6	5	None.	None.	None.	None.
	Spacing	56"	51"	48"	54"	51"	54"	None.	None.	None.	None.
	Scantling and Sketch	3 1/2"x3 1/2"x4.5"	all same as No 1.								
FORE AND AFTERS	Bearing Surface	3"	3"	3"	3"	3"	3"	None.	None.	None.	None.
	Number	4	6	5	3	6	5	None.	None.	None.	None.
	Spacing	56"	51"	48"	54"	51"	54"	None.	None.	None.	None.
	Unsupported Lengths	3 1/2"x3 1/2"x4.5"	all same as No 1.								
HATCH COVERS	Scantling and Sketch	3 1/2"x3 1/2"x4.5"	all same as No 1.								
	Bearing Surface	3"	3"	3"	3"	3"	3"	None.	None.	None.	None.
	Material	Wood	Same as No 1.					Wood	Wood	Wood	Wood
	Thickness	3"	Same as No 1.					3"	3"	3"	3"
Spacing of Cleats		26"-28"	Same as No 1.					21"	21"	22"	26"
Number of Tarpaulins		3	Same as No 1.					3	3	3	3

*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.*

Bolted steel storm covers fitted to small bunker hatches on weather deck p 95.

Particulars of fiddle, funnel and ventilator coamings: *Fiddle coaming & plating - 4".
 Funnel - 3".
 Hinged steel covers fitted to all fiddle gratings.*

Particulars of Flush Bunker Scuttles: *None. All bunker hatches on weather deck have 18" coamings, wood covers & tarpaulins - also bolted steel storm covers fitting over tarpaulins.*

Particulars of Companionways: *Ladders to crew's quarters inside poop only.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: *30"-32" on fore decks.
 36" high amidships. Wood plugs and canvas covers in all cases.*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks: *18"-20" high.
 Canvas covers are being fitted & snifting holes drilled.*

Particulars of Gangway Cargo and Coaling Ports: *Hinged steel door into shelter from deck bunkers pos. with efficient dogs & clips.*

Particulars of Scuppers and Sanitary Discharge Pipes

Single storm valves fitted - all discharge pipes are above main decks.

Particulars of Side Scuttles:

Hinged dead lights fitted in all cases.

Particulars of Guard Rails:

48" high of efficient construction & satisfactorily supported.

Particulars of Gangways, Lifelines, etc.:

*No permanent fittings.
 Satisfactory existing means of rigging life lines when required.*

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.

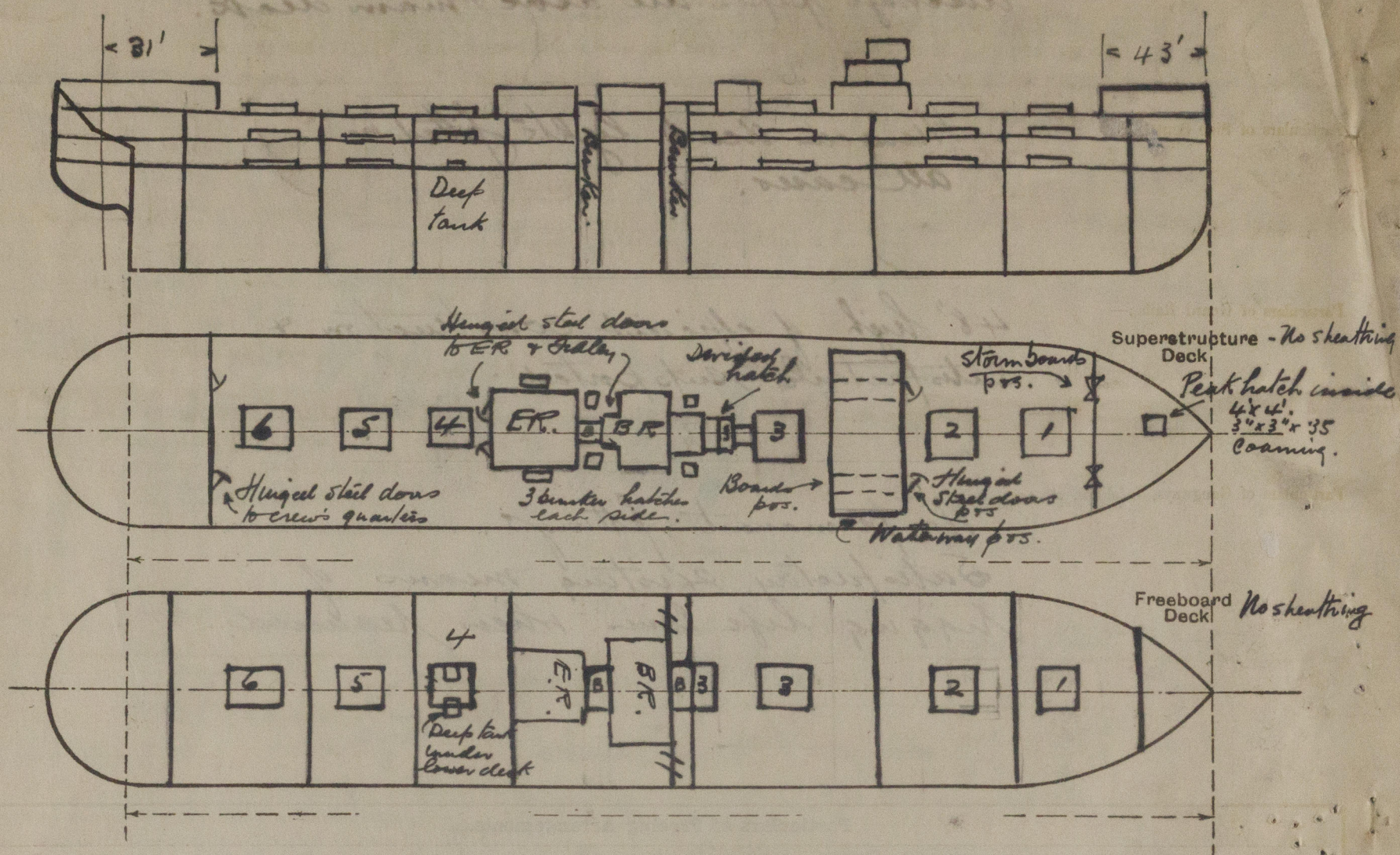
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	3.5"	3.5"	6"x3 1/2"x5"	28"	6"x6" lugs.	24"	15"	7'-6"
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	See deck house below.							
Bridge, Forward Bulkhead								
Forecastle Bulkhead	3.5"	3	3 1/2"x3 1/2"x3"	28"	None.	40" 24"	15"	7'-6"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	4	4	3"x3"x3.5"	24"	None.	28"		8'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships (Bridge)	4.5"	4	8"x3 1/2"x6" BA.	30"-32"	10"x10"x4.5" lugs.	30"	15"	8'-0"

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

Poop Bulkhead	Hinged steel h.t. doors with clips.
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	Closing boards in passage - 3/4 height - in riveted channels
Bridge, Forward Bulkhead	Hinged steel doors with clips.
Forecastle Bulkhead	Closing boards in riveted channels - full height also steel doors
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Hinged steel doors 24"-28" with 18"-20" lugs.
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:—



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

Vessel examined in dry dock.

Displacement at load draft — 29' 3" = 16,125.
Tons per inch " " " — " = 52.7.

Builder's name and yard number

Names of sister ships

Owners

Fee £ 690/-/-

Received by me



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