

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship , Tanker				Port of Survey <u>Antwerp</u>	
having <u>Poop, Bridge and Forecastle.</u>				Date of Survey <u>31st May 1933.</u>	
<u>WAN SHUN</u>		(Type of Superstructures.)			
Ship's Name <u>(or MANIEMA)</u>		Nationality and Port of Registry <u>Chefoo</u> <u>Chinese</u>	Official Number <u>2080.T.</u>	Gross Tonnage <u>1920-1.</u>	Date of Build <u>ANTWERP. London</u>
Moulded Dimensions: Length <u>320.58</u>		Breadth <u>46.50</u>	Depth <u>25'6"</u>		
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>7.198</u> tons					
Coefficient of fineness for use with Tables <u>754</u>					
Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth <u>25.50'</u>		(a) Where D is greater than Table depth (D - Table depth) R = $(25.54 - 22.44) 2.543$ $= + 8.90''$		Moulded Breadth (B) <u>46.50'</u>	
Stringer plate <u>.04</u>		(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u>		Standard Round of Beam = $\frac{B \times 12}{50} = \frac{11.16}{50} = \frac{11.50}{50} = 11.50'$	
Sheathing on exposed deck <u>✓</u>		If restricted by superstructures <u>✓</u>		Ship's Round of Beam = $\frac{11.50}{50} = 11.50'$	
T $\left(\frac{L-S}{L} \right) =$				Difference	
Depth for Freeboard (D) = <u>25.54</u>				Restricted to	
				Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.34}{4} \times .514 = -.04''$	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	32.87	32.87	2'6"		32.87
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed... ..	98.00'	98.00	2'6"		98.00
" overhang aft ...	2.04'	1.53			1.53
" overhang forward					
Forecastle enclosed ...	28.17'	28.17	2'6"		28.17
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	161.08	160.57			160.57

Standard Height of Superstructure 6.81

" " R.Q.D. ✓

Deduction for complete superstructure 37.37

Percentage covered $\frac{S}{L} = 48.73\%$

" " $\frac{S_1}{L} = 48.57\%$

" " $\frac{E}{L} = 48.57\%$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B.
(corrected for absence of forecastle (if required)) 34.78%

Interpolation for bridge less than .2L (if required)

Deduction = 37.37 × .3478 = -13.00"

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SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	43.06	1	43.06	51°	51.00	1	51.00
$\frac{1}{6}$ L from A.P. ...	19.16	4	76.64	22°	21.72	4	87.68
$\frac{2}{6}$ L " ...	4.74	2	9.48	5 $\frac{1}{2}$ °	5.48	2	10.76
Amidships ...	✓	4	✓	0	✓	4	✓
$\frac{2}{6}$ L from F.P. ...	9.47	2	18.94	11°	11.07	2	22.02
$\frac{1}{6}$ L " ...	38.32	4	153.28	44°	44.44	4	176.16
F.P. ...	86.12	1	86.12	102°	102.00	1	102.00
Total ...			387.22				449.82

Mean actual sheer aft = *Excess*

Mean actual sheer forward = *Excess*

Length of enclosed superstructure forward of amidships = *.154*

L

" " aft of " = *.142*

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(\bar{75} - \frac{S}{2L} \right) = \frac{62.30}{18} \left(75 - \frac{2436}{5864} \right) = -1.75^{\circ}$$

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. ✓

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p style="text-align: right;">Ft.</p> <p>Depth to Freeboard Deck = _____</p> <p>Summer freeboard = _____</p> <p>Moulded draught (d) = _____</p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = _____</p> <p>Addition for Winter North Atlantic Freeboard (if required) = _____</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>Δ = _____</p> <p>Tons per inch immersion at summer load water line</p> <p>T = _____</p> <p>Deduction = $\frac{\Delta}{40 T}$ inches = _____</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient $\frac{.68 + .754}{1.36} = \frac{1.434}{1360}$</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th style="text-align: center;">+</th> <th style="text-align: center;">-</th> </tr> <tr> <td>Depth Correction</td> <td style="text-align: center;">8.90</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Deduction for superstructures</td> <td style="text-align: center;">-</td> <td style="text-align: center;">13.00</td> </tr> <tr> <td>Sheer correction</td> <td style="text-align: center;">-</td> <td style="text-align: center;">1.75</td> </tr> <tr> <td>Round of Beam correction</td> <td style="text-align: center;">-</td> <td style="text-align: center;">.04</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td></td> <td style="text-align: center;">8.90</td> <td style="text-align: center;">14.79</td> </tr> </table> <p style="text-align: right;">Summer Freeboard = 57.16 - 53.95 = 5.89 - 48.06 = 5.89</p>		+	-	Depth Correction	8.90	-	Deduction for superstructures	-	13.00	Sheer correction	-	1.75	Round of Beam correction	-	.04	Correction for Thickness of Deck amidships	-	-	Other corrections, scantlings, etc.	-	-		8.90	14.79	<p>57.16</p> <hr/> <p>53.95</p>
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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	On 6" Deck	On 4" Deck	On 3" Deck	On 2" Deck	On 1" Deck	On 1/2" Deck	On 1/4" Deck	On 1/8" Deck	On 1/16" Deck	On 1/32" Deck
Dimensions of Hatchway	26' 6" x 18' 0"	10' 3" x 18' 0"	12' 3" x 18' 0"	5' 3" x 16' 0"	8' 0" x 3' 6"	5' 6" x 3' 6"	4' 9" x 2' 6"	4' 9" x 1' 9"		
COAMINGS	Height above Deck ... 30"	30"	30"	30"	30"	30"	30"	30"	30"	30"
Thickness ... 1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Stiffeners ... 2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"
Brackets, Stays ... 2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"	2 1/2" x 1/2"
HATCH BEAMS	Number ... 5	1	2							
Spacing ... 4' 7 1/2"	4' 7 1/2"	5' 4"	4' 1"							
Scantling and Sketch	Rate ... 15 1/2" x 3/4"	15 1/2" x 3/4"	16" x 3/4"							
Bearing Surface	4' 3" x 3" x 4' 3"	3' 1"								
FORE AND AFTERS	Number ...									
Spacing ...										
Unsupported Lengths										
Scantling and Sketch										
Bearing Surface										
HATCH COVERS	Material ...									
Thickness ...										
How fitted										
Bearing Surface										
Spacing of Cleats										
Number of Tarpaulins	3	2	1	1	1	1	1	1	1	1

*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, laid up, only 1 Tarpaulin on each hatch on the weather deck.*
 Are lashings provided in accordance with rule requirements? *yes.*

Particulars of fiddle, funnel and ventilator coamings: — 2 ventilators, 28" dia. to R.R. / 15" to B.R.
All fiddle openings are provided with hinged steel covers. / Eng Room Steel highlights with flag covers & bell's eye.

Particulars of Flush Bunker Scuttles: —

Particulars of Companionways: —

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: —
 On 6" Deck 1 off 12" dia. x 28" canopy x 26" / 2 " 15" x 20" x 18" 40"
 On 4" Deck 2 off 12" dia. x 28" canopy x 26" / 3 " 8 1/2" x 18" x 25"
 On 3" Deck 10 " 15" x 36" x 18" 40" / 2 " 6" x 18" x 25"
 On 2" Deck 1 " 9" x 18" x 18" 36" / 2 " 15" x 18" x 18" 40"
All ventilators are provided with wood plugs & canvas covers.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks: —
 On 6" Deck Steel pipes 3" dia x 14" high. / On 4" Deck Steel pipe 3" dia x 13" high.
 On 3" Deck " " 2 1/2" dia x 13" " /
 On 2" Deck " " 2 1/2" x 14" " /
 On 1" Deck " " 1 1/2" x 2 1/2" (to E.R. Tank) /
 and 2 goose-necks 6" dia x 11 1/2" high.
No means of closing the openings. — / By wood plugs with chains

Particulars of Gangway Cargo and Coaling Ports: —

Manila

Particulars of Scuppers and Sanitary Discharge Pipes — 4 scuppers or sanitary discharge pipes for bridge spaces, all fitted with non-return valves on this side. / 1 " each side from bridge spaces.

Particulars of Side Scuttles: 9" side scuttles in poop, with steel covers permanently attached.

Particulars of Guard Rails: —
 On 6" Deck 36" 1" bar / 28" 1 1/2" steel wire / 18" 3/4" bar / 9" 1 1/2" steel wire / 1 1/2" spaced 60"
 On 4" Deck 28" 3/4" bar / 14" 3/4" bar / 1 1/2" spaced 54"

Particulars of Gangways, Lifelines, etc.: —

Lifelines provided in each well.

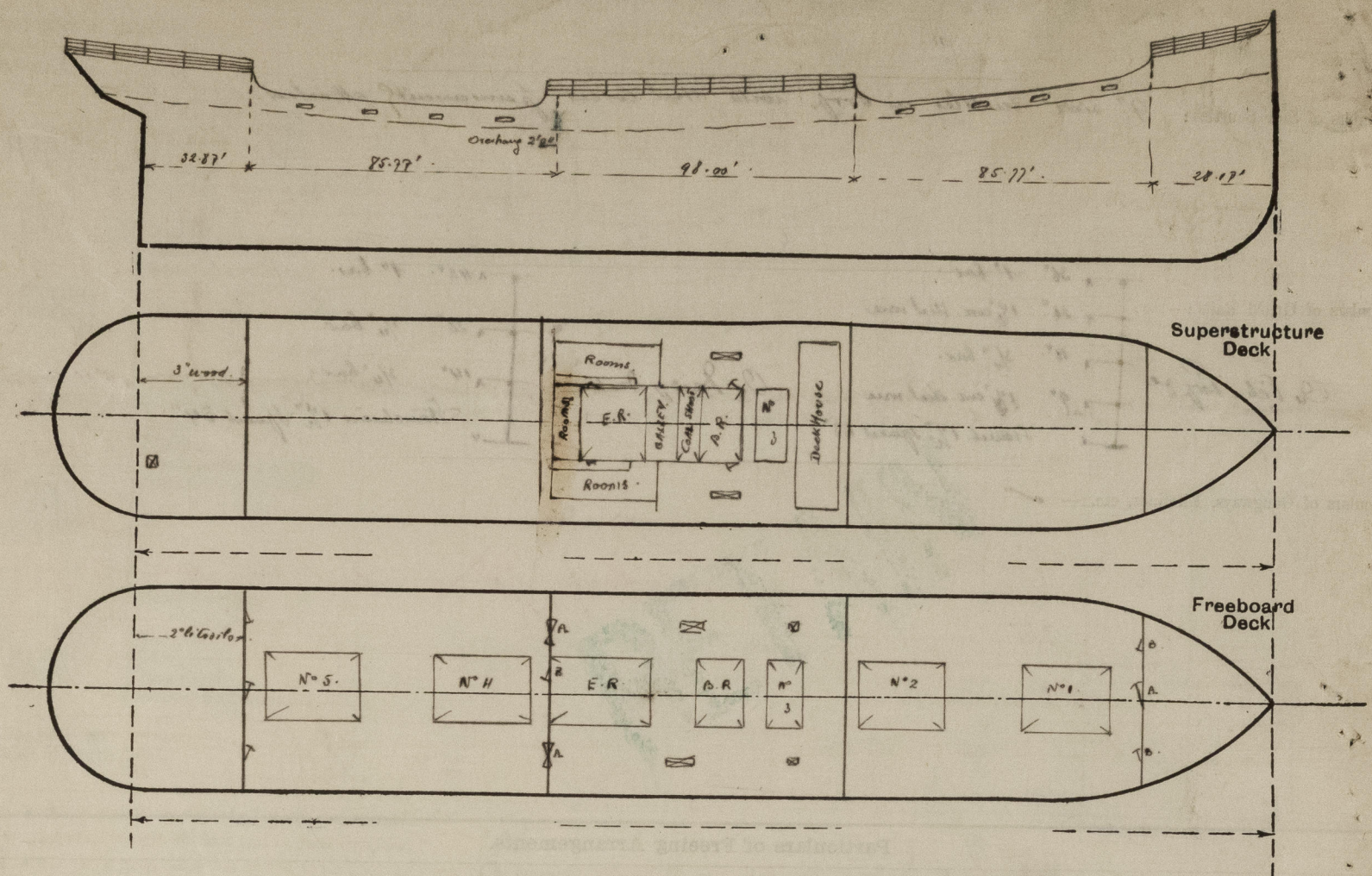
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	75.77	3' 10"	3' 0" x 1' 6"	4	18 sq ft	17.25 sq ft
Forward Well	85.77	3' 10"	3' 0" x 1' 6"	4	18 sq ft	17.25 sq ft

State position of each freeing port ... After Well: — Regularly at 14', 28', 42' & 56' from bridge bulkhead. / Forward Well: — at 14', 28', 42' & 56' from bridge bulkhead. / Lower edge 12" above deck.
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — No shutters, 2 bars 1" dia. across.
 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	40"	36"	L 6" x 3 1/2" x 40"	38"		60" x 24"	18"	7' 6"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	36"	32"	L 4" x 3 1/2" x 40"	30"		A. 30" x 42" / B. 30" x 24"	18"	7' 6"
Bridge, Forward Bulkhead	44"	40"	L 8 1/2" x 3 1/2" x 50"	47"	Rd. Top & Bot.	60" x 32"	18"	7' 6"
Forecastle Bulkhead	32"	30"	L 3 1/2" x 3 1/2" x 40"	30"		A. 60" x 48" / B. 60" x 24"	18"	7' 6"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	32"	30"	L 1 1/2" x 3 1/2" x 36"	39"		54" x 24"	18"	7' 3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	32"	30"				none		7' 6"
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	Hinged steel door with ordinary lock
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	A. To bridge space. 3" shortening board, full height of the opening, in channels timber to the bulkhead. / B. To Eng Room. Hinged steel door manipulated from both sides.
Bridge, Forward Bulkhead	Hinged steel door, with 10 clips tapped in bulkhead and manipulated from well.
Forecastle Bulkhead	A. Channels are provided for shortening board, a lattice wood door fitted in the opening. / B. Hinged steel door with ordinary lock.
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	Hinged steel door to fiddle, hard wood door to Eng Room, manipulated from both sides.
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:—

External displacement at 21' draught. 9000 Tons. Tons per inch. 30.6595.
 " 22' " 7.370 " " " 30.8595.
 The survey has been held afloat, and confined to the examination of hatchways, means of access along the openings etc. The S.S. No 3 has not been further advanced.

[Signature]

Builder's name and yard number *Lloyd Royal Belg. (Gr Britain) Lt. Glasgow.*

Names of sister ships

Owners *Compagnie Maritime Belg. (Lloyd Royal) Soc. Anon.*

Fee £ *Feb. 2. 1900.* : *1/6/33.* Received by me
Dr Exp. Rec. 30.-



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Lloyd's Register
Foundation