

# DISCLOSED COPY WRITTEN Lloyd's Register of Shipping.SURVEYS FOR FREEBOARD.

23 SEP 1935

Index. No. 19115.  
(For London Office only.)

MEL. RPT No 5902.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having 1 Deck (pt Iron & pt Steel)  
Detached Bridge and Forecastle.  
 (Type of Superstructures.)

Port of Survey **MELBOURNE**Date of Survey 15<sup>th</sup> & 16<sup>th</sup> August 1935.Name of Surveyor B. P. Fielden.Particulars of Classification ± 100 A.1.S.S. 2<sup>nd</sup> No 3 9.33

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<b>YARRA</b>	BRITISH. MELBOURNE.	120737	2257	1907-5
Moulded Dimensions: Length <u>292</u> ✓ Breadth <u>43.66</u> ✓ Depth <u>21'-6"</u> ✓				
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>5191</u> tons				
Coefficient of fineness for use with Tables <u>78</u>				

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	... 21'-5"	(a) Where D is greater than Table depth (D - Table depth) B = $(21.54 - 19.47) \times 2.24 = + 4.65$ ✓		Moulded Breadth (B)	43.66.
Stringer plate	... 0.4	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓		Standard Round of Beam = $\frac{B \times 12}{50} =$	10.48
Sheathing on exposed deck	N/A. ✓			Ship's Round of Beam =	11.0
T $\left(\frac{L-S}{L}\right) =$				Difference	.52
Depth for Freeboard (D) =	21.54 ✓	If restricted by superstructures ✓		Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right) =$	$\frac{.52}{4} \times .6752 = -.09$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>i</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	64.0 ✓	64.00	7'-0"	✓	64.00
" overhang aft 1.					
" overhang forward					
F'cle enclosed ...	30.24 ✓	30.24	7'-3"	✓	30.24
" overhang ...	5.78	.59			.59
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	95.42	94.83			94.83

Standard Height of Superstructure	6.42
" " R.Q.D.	✓
Deduction for complete superstructure	34.80
Percentage covered $\frac{S}{L} =$	32.68
" " $\frac{S_1}{L} =$	32.48 ✓
" " $\frac{E}{L} =$	32.48 ✓
Percentage from Table, Line A.	✓
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	21.10 ✓
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	✓
Deduction =	$34.80 \times .211 = - 7.34$ ✓

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	39.20	1	39.20	42.0 ✓	42.0	1	42.0
$\frac{1}{8}L$ from A.P. ...	17.44	4	69.76	18.5 ✓	18.5	4	74.0
$\frac{2}{8}L$ " ...	4.31	2	8.62	4.5 ✓	4.5	2	9.0
Amidships ...	-	4	-	0	-	4	-
$\frac{3}{8}L$ from F.P. ...	8.62	2	17.24	9.25 ✓	9.25	2	18.5
$\frac{4}{8}L$ " ...	34.88	4	139.52	37.0 ✓	37.0	4	148.0
F.P. ...	78.40	1	78.40	84.0 ✓	84.0	1	84.0
Total ...			352.74				375.50

Mean actual sheer aft = Sum  
 Mean standard sheer aft = Sum

Mean actual sheer forward = Sum  
 Mean standard sheer forward = Sum

Length of enclosed superstructure forward of amidships = 0.1  
 " " aft of " = 0.12

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{22.76}{18} \left( \frac{.75 - .1634}{.58686} \right) = -.74$

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 = Ft.  
 Summer freeboard =           
 Moulded draught (d) =         

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches =           
 Addition for Winter North Atlantic Freeboard (if required) =         

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 =         

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{78 + .68}{1.36} = \frac{1.46}{1.36} =$ 

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

+	-
4.65	-
-	7.34
-	0.74
-	0.09
-	-
-	-
4.65	8.17

Summer Freeboard = 41.01SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc ...	7 1/2
Fresh Water Line " " ...	4 1/2
Tropical Line " " ...	3
Winter Line below " " ...	3
Winter North Atlantic Line " " ...	5

Tropical Fresh Water Freeboard ...	3'-4 3/4
Fresh Water " " ...	2'-9 1/4
Tropical " " ...	3'-0 1/4
Winter " " ...	3'-1 3/4
Winter North Atlantic " " ...	3'-7 3/4

Existing freeboard as reassigned being more favorable than those computed under the Convention regulations.

1 OCT 1935



Yarra

Particulars of fiddle, funnel and ventilator coamings:—  
On Boiler casing which is 2'-10" in height above bridge deck:—  
Funnel coaming 3'-3" in height. Fiddle gratings fitted with hinged steel storm covers.  
Coaming hatchway, 16'-0" x 5'-0". Coaming 10" x 38". Wood <sup>clear</sup> 2½" thick on 2½" bearing surface, fitted with cleats, battens and 1 tarpaulin.  
On Engine casing which is 6'-10" in height above bridge deck:—  
Engine Room skylight and ventilators of strong steel construction.

None

None.

Cowl Vents.

On Forecastle:-  
 To hold, 1-15" dia, coaming 36" in height.  
 To Stow { 1-9" " " 36" "  
 " 1-6" " " 36" "  
 To forecaste { 1-9" dia 9 26" dia " 15" "  
 " 1-12" dia Coaming 30" in height.  
 All supplied with wood plugs and canvas covers.

On Fore Deck:- 2-15" dia, coamings 36" in height.  
 On aft Deck:- 4-15" " " 36" "

On Forecastle:- Swan neck type, cast iron,  $3\frac{1}{2}$ " dia, height 10" height to opening 5", fitted with wood plugs.  
Others flush with deck and fitted with screwed caps. ✓

None

Sanitary discharges from within superstructures each fitted with one cast steel automatic storm valve discharging 3'0" below freeboard deck.

Scuppers from houses on bridge fitted with open bends discharging above freeboard deck.

None below freeboard deck. ✓

In Fore castle and Bridge:- 8" and 8½" diameter with brass frames and fitted with cast iron hinged inside deadlights. ✓

On forecastle and bridge:- 2 bar rails 3'-3" in height. ✓

Fittings provided for rigging lifelines in the forward and after wells 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 Deck ... ..	111' - 0"	3' - 6"	3' - 0" x 1' - 3"	5	18.75	22.2
Forward Well ... ..	83' - 10"	3' - 5"	3' - 0" x 1' - 3"	4	15.00	16.77

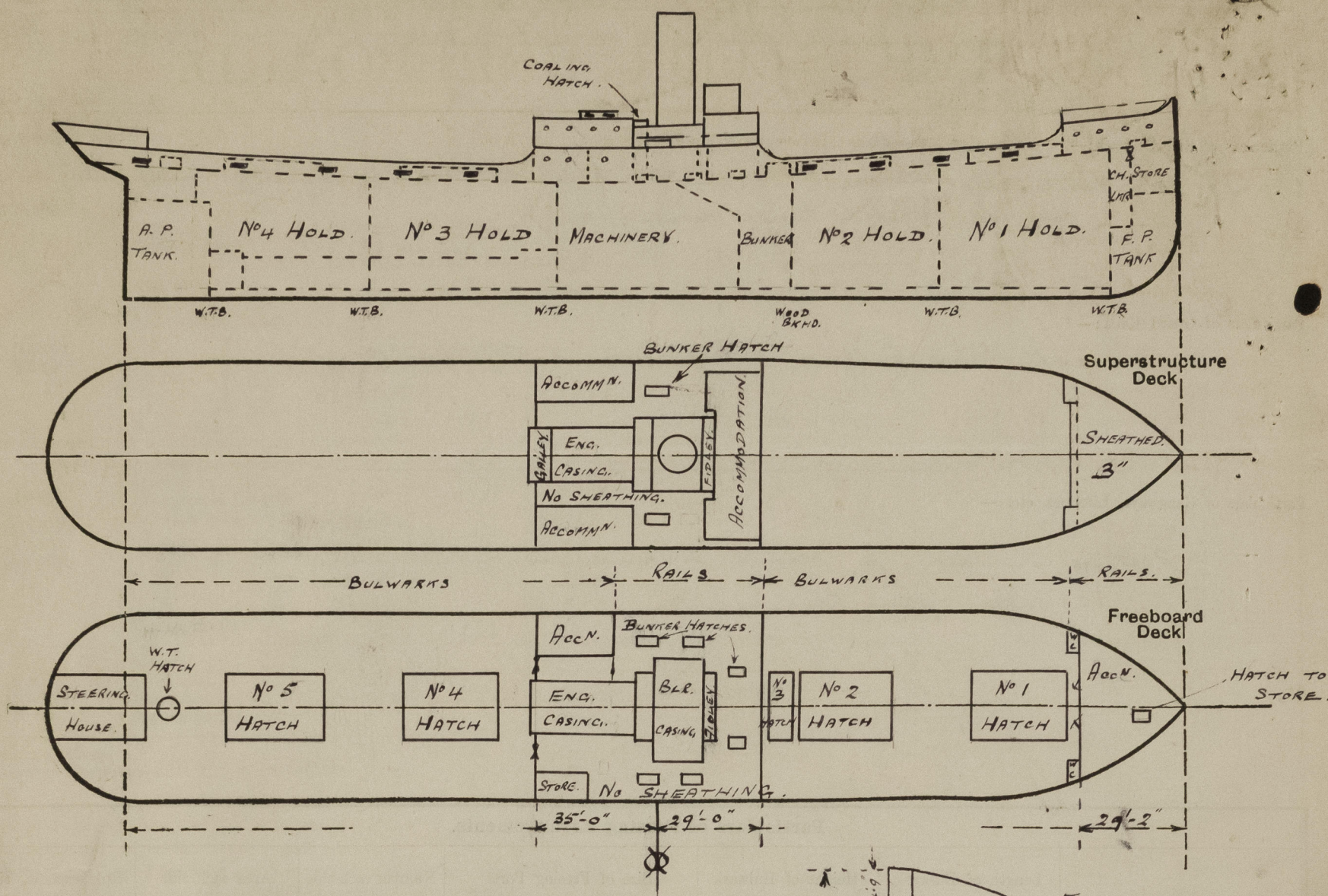
State position of each freeing port ... .. } After Well: — 8 FT — 11'-0" — 17'-4" — 18'-3" — 19'-4" — 17'-0" — 12'-3" —  
(F. and A. position and height above deck edge) } Forward Well: — 16'-7" — 17'-0" — 17'-3" — 16'-10" —  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Height above deck edge 11" Each fitted with hinged shutter and one horizontal bar.

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 ... ..	·38	·32	3½ x 3½ x 38 L	2' - 6"	NONE.	4' 11" x 3' 6"	20"	7' - 0"	
Bridge, Forward Bulkhead ... ..	·46	·42	7" x 3½" L	2' - 6"	BRAKETS TOP & BOTTOM.	NONE.	✓	7' - 0"	
Forecastle Bulkhead ... ..	·25	·26	PLATE FLANGED 4"	5' - 0"	NONE.	4' 4" x 1' - 9"	19"	7' - 0"	
Trunk, Aft ... ..	✓								
Trunk, Forward ... ..	✓								
Exposed Machinery Casings on Free-board or Raised Quarter	·38	·32	3½ x 3½ x 38 L	2' - 6"	NONE.	NONE.	✓	7' - 0"	
Exposed Machinery Casings on Super-structure Decks ... ..	·38	·32	3¼ x 3¼ x 38 L	4' - 0"	BRAKETS AT TOP.	4' 4" x 2' - 0"	20"	6' - 10" AND 3' - 10"	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	·38	·32	8" x 3½" B.P.	4' - 0"	RYETED TO BRIDGE DECK BEAMS.	4' 4" x 2' - 0"	16"	7' - 0"	
Deckhouses on Flush Deck Ships ...	✓								

Poop Bulkhead ... ..	✓
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ... ..	Storm boards 2 3/4" thick in riveted channels, full height of opening. No openings. ✓
Bridge, Forward Bulkhead ... ..	✓
Forecastle Bulkhead ... ..	Hardwood doors 1 1/2" thick. Can be manipulated from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	No openings. ✓
Exposed Machinery Casings on Superstructure Decks ... ..	Hardwood doors 1 3/8" thick. Can be manipulated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	Steel doors 3/32" thick. Can be 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:—

Small Hatchways on Freeboard Deck.

To after peak: 2'-0" diameter. Coaming 18"x38". Bolted steel cover 38" thick.

Bunker hatchways within Bridge: Two each side 5'-9"x3'-0". One each side 3'-8"x3'-0".

Coamings 10"x38". Wood hatches 2 1/2" thick on 2 1/4" bearing surface. Each fitted with cleats, battens and tarpaulin.

To fore peak, within forecastle: 4'-8"x2'-6". Coaming 10"x38". Wood cover 2 1/2" thick on 2 1/2" bearing surface, fitted with cleats, battens and tarpaulin.

File. 29.17 onlay 2.25  
 Less 24x4x75 1.07  
 35.58 30.24 1.18

Cargo vessel usually trading between Australian Ports.

Now surveyed in dry dock and afloat, but not including any part of Special Survey.

Builder's name and yard number Furness Withy & Co. Ltd. West Hartlepool. Yard No 301.

Names of sister ships

Owners Huddart Parker Ltd.

Fee £ 12 : 0 : 0

Received by me



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