

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

*One deck (steel)**Liverpool, Bridge, and Raised Quarter Deck*

(Type of Superstructures.)

Port of Survey

*Sydney N.S.W.*

Date of Survey

*14<sup>th</sup> & 15<sup>th</sup> August 1935*

Name of Surveyor

*E. L. Cartwright*

Particulars of Classification

*+ 100 A1**S.S. Syd. No 1-31*

Ship's Name

**"CALEDON"**

Nationality and Port of Registry

*British  
Sydney N.S.W.*

Official Number

*155314*

Gross Tonnage

*1083  
1063*

Date of Build

*1924-4*Moulded Dimensions: Length *213.37* Breadth *32.4.33* Depth *15.6" to Upper Deck.*Moulded displacement at moulded draught = 85 per cent. of moulded depth *1921* tons

Coefficient of fineness for use with Tables

*.74*

Depth for Freeboard (D)

Moulded depth ... *15.5*Stringer plate ... *.04*

Sheathing on exposed deck

 $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = *15.54*

Depth correction

(a) Where D is greater than Table depth

(D - Table depth) R =

 $(15.54 - 14.23) \times 1.641 = + 2.15$ 

(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) *32.33*Standard Round of Beam =  $\frac{B \times 12}{50} = 7.76$ Ship's Round of Beam = *8"*Difference *.24*

Restricted to

Correction =  $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.24}{4} \times .202 = .01$ 

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	<i>131.83</i>	<i>131.73</i>	<i>3.6"</i>	<i>x 3.5/3756</i>	<i>122.76</i>
" overhang ...	<i>None</i>				
Bridge enclosed ...	<i>11.3</i>	<i>11.25</i>	<i>4.6"</i>		<i>11.25</i>
" overhang aft ...	<i>None</i>				
" overhang forward ...	<i>None</i>				
F'cle enclosed ...	<i>27.34</i>	<i>27.27</i>	<i>4.6"</i>		<i>27.27</i>
" overhang ...	<i>None</i>				
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	<i>170.25</i>	<i>170.25</i>			<i>161.28</i>

Standard Height of Superstructure

*6.0*

" " R.Q.D.

*3.756*

Deduction for complete superstructure

*27.34*Percentage covered  $\frac{S}{L} =$ *79.80*" "  $\frac{S_1}{L} =$ *79.80*" "  $\frac{E}{L} =$ *75.60*

Percentage from Table, Line A.

*69.89*

(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 =  $27.34 \times 69.89 = - 19.11$ 

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>31.34</i>	<i>1</i>	<i>31.34</i>		<i>33"</i>	<i>33</i>	<i>1</i>	<i>33</i>	
$\frac{1}{4}$ L from A.P. ...	<i>13.995</i>	<i>4</i>	<i>55.98</i>		<i>14.5"</i>	<i>14.5</i>	<i>4</i>	<i>58</i>	
$\frac{2}{4}$ L " ...	<i>3.445</i>	<i>2</i>	<i>6.89</i>		<i>3.5"</i>	<i>3.5</i>	<i>2</i>	<i>7</i>	
Amidships ...	<i>-</i>	<i>4</i>	<i>-</i>		<i>0</i>	<i>-</i>	<i>4</i>	<i>-</i>	
$\frac{3}{4}$ L from F.P. ...	<i>6.89</i>	<i>2</i>	<i>13.78</i>		<i>4.5"</i>	<i>7.5</i>	<i>2</i>	<i>15</i>	
$\frac{1}{4}$ L " ...	<i>27.89</i>	<i>4</i>	<i>111.56</i>		<i>30"</i>	<i>30</i>	<i>4</i>	<i>120</i>	
F.P. ...	<i>62.67</i>	<i>1</i>	<i>62.67</i>		<i>69"</i>	<i>69</i>	<i>1</i>	<i>69</i>	
Total ...		<i>✓</i>	<i>282.22</i>					<i>302</i>	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{.2L} \right) =$  $\frac{19.78}{18} \left( \frac{.75 - .399}{.351} \right) = - .39$ 

If limited on account of midship superstructure.

*Yes. Nil.*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 = *19.04*Summer freeboard = *4.29*Moulded draught (d) = *14.75*

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = *3.69 = 3 $\frac{3}{4}$* 

Addition for Winter North Atlantic Freeboard (if

required = *5 $\frac{3}{4}$* 

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 $\frac{1}{4} = 3\frac{3}{4}$ 

TABULAR FREEBOARD

Correction for coefficient

corrected for Flush Deck (if required)

 $\frac{.74 + .68}{1.36} = \frac{1.42}{1.36} =$ 

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

*25.4**26.53**25.4*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *Raised quarter*, Steel Deck:—Tropical Fresh Water Line above Centre of Disc ... *7 $\frac{1}{2}$* Fresh Water Line " " ... *3 $\frac{3}{4}$* Tropical Line " " ... *3 $\frac{3}{4}$* Winter Line below " " ... *3 $\frac{3}{4}$* Winter North Atlantic Line " " ... *5 $\frac{3}{4}$* 

Tropical Fresh Water Freeboard ...

Fresh Water " ...

Tropical " ...

Winter " ...

Winter North Atlantic " ...

*4 $\frac{1}{2}$* *3 $\frac{3}{4}$* *3 $\frac{3}{4}$* *3 $\frac{3}{4}$* *4 $\frac{1}{2}$* *4 $\frac{1}{2}$* *4 $\frac{1}{2}$* *4 $\frac{1}{2}$* *4 $\frac{1}{2}$* *4 $\frac{1}{2}$*



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	FREEBOARD DECK			RAISED QUARTER DECK					
	Nº 1	Nº 2		Nº 3	Nº 4	Nº 5			
Dimensions of Hatchway	16'-10 1/2" x 22'	16'-10 1/2" x 22'		16'-0" x 22'-0"	16'-0" x 22'-0"	16'-0" x 22'-0"			
COAMINGS	Height above Deck	48"	48"	42"	42"	42"			
	Thickness	1/4"	1/4"	1/4"	1/4"	1/4"			
	Sides	1/4"	1/4"	1/4"	1/4"	1/4"			
	Stiffeners	7" x 3" x 4 B.A. 12" FROM TOP OF COAMING							
	Brackets, Stays	6" x 3" x 4 B. PLATE & ANGLES IN CENTRE OF SIDE OF COAMING							
HATCH BEAMS	Number	2	2	2	2	2			
	Spacing	5'-9"	5'-9"	5'-6"	5'-6"	5'-6"			
	Scantling and Sketch	PLATE:- 20 3/4" x 11" x 3/8" ANGLES:- 4 1/2" x 3" x 3/8"							
	Bearing Surface	4"		4"	4"	4"			
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch	← NONE →		← NONE →					
	Bearing Surface								
HATCH COVERS	Material	OREGON PINE	OREGON PINE	OREGON PINE	OREGON PINE	OREGON PINE			
	Thickness	3"	3"	3"	3"	3"			
	How fitted	FORE & AFT	FORE & AFT	FORE & AFT	FORE & AFT	FORE & AFT			
	Bearing Surface	3"	3"	3"	3"	3"			
Spacing of Cleats	18" x 24"	18" x 24"		17" x 22"	17" x 22"	17" x 22"			
Number of Tarpaulins	3	3		3	3	3			
*Are wood fore and afters steel shod at all bearing surfaces? <b>NONE</b> Are battens and wedges efficient and in good condition? <b>YES</b> Are tarpaulins in good condition and in accordance with rule requirements? <b>YES</b> Are lashings provided in accordance with rule requirements? <b>YES, RING BOLTS AND LASHINGS. FITTINGS FOR SPECIAL LASHINGS PROVIDED.</b>									

Particulars of fiddle, funnel and ventilator coamings:—

*Fiddle gratings fitted with hinged steel covers, secured by cleats and ring bolts.*  
*Funnel fitted with air casing, 24" in height from top of casing, with cleat over.*  
*Engine room skylights of steel, with hinged covers.*  
*Ventilators of strong construction, passing through casing, could operate from inside of casing.*

Particulars of Flush Bunker Scuttles:—

**NONE**

Particulars of Companionways:—

**NONE**

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— **WOOD PLUGS & CANVAS COVERS PROVIDED.**

*On Forecastle Deck:— Four, 9" diam. 36" coaming; One, 6" diam. 36" coaming; Four, 6" x 4", 9" to opening, Swan neck type.*  
*On Fore Well:— 2 openings through top of forewell bulkhead, and 2 openings through top of bridge forward bulkhead from trunk ventilators inside of bulkheads leading to No 1 & 2 holds respectively, height to bottom of flanged openings 6'-3", fitted with hinged steel covers, secured by screws and wing nuts.*  
*On Bridge Deck:— One, 9" diam. and two, 6" diam, port & starboard sides, height of coamings 24"*  
*On Raised Quarter Deck:— Two, 12" diam, 36" coamings, to holds. All coamings riveted to deck.*

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

*On Forecastle Deck:— One, 4" diam, 21" height to opening, cast iron, Swan neck type.*  
*On Fore Well:— Two each side 8" diam, 30" height to opening, steel, Swan neck type.*  
*On Raised Quarter Deck:— Four on port, and three on starboard sides, 8" diam, 24" to 30" height to opening, steel, Swan neck type. One each side 5 1/2" x 3 1/2", height to opening 30", cast iron, Swan neck type.*  
*Canvas covers supplied as temporary closing appliances.*

Particulars of Gangway Cargo and Coaling Ports:—

**NONE**

Particulars of Scuppers and Sanitary Discharge Pipes:—

*Sanitary discharges fitted with one bronze automatic steam valve.*  
*No scupper or sanitary discharges from spaces below the freeboard deck.*

Particulars of Side Scuttles:—

*On Forecastle:— Six, 10 1/2" diam on Port side. Six, 10 1/2" diam, on Starboard side.*  
*On Bridge:— One, 10 1/2" diam on Port side, and two, 10 1/2" diam, on Starboard side.*  
*All sidelights fitted with hinged deadlights.*  
*No sidelights fitted below the freeboard deck, or raised quarter deck.*

Particulars of Guard Rails:—

*On Forecastle Deck:— 3 bar open rails, 42" in height.*  
*From Forecastle to Bridge:— Steel bulwarks, 42" in height.*  
*From Bridge to Stern:— Steel bulwarks 42" in height.*  
*Steel bulwarks efficiently stiffened with 4" x 2 1/2" x 37" built plate & angles, spaced 61" to 65" apart.*

Particulars of Gangways, Lifelines, etc.:—

*Efficient lifelines erected 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	131'-8 3/4"	42"	31" x 16 1/2" 33" x 17 1/2"	4 3	44-2 \$ 26-2	26-84 \$
Forward Well	43'-6"	42"	31" x 16 1/2"	3	10-65 \$	10-65 \$
State position of each freeing port ... After Well:— FWD, 17'-6" → 21'-4" → 21'-1" → 55'-1" → 6'-4 1/2" → AFT (F. and A. position and height above deck edge) Forward Well:— FWD, 13'-1" → 8'-3" → 8'-11" → 5'-6" → AFT State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Height above deck edge = 10" Additional area where sheer is less than standard. Hinged steel shutters, no rails fitted. <i>Two horizontal bars.</i>						

## 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	✓ 35"	✓ 35"	DIAPHRAM PLATE AND FLANGED PLATE BRACKETS	✓	TO BEAMS & FRAMES	NONE	NONE	3'-6"
Bridge, After Bulkhead	✓ 37"	✓ 31"	6" x 3 1/2" x 31" B.A.	30"	BRACKETS AT TOP ONLY	NONE	NONE	4'-0"
Bridge, Forward Bulkhead	✓ 37"	✓ 31"	6" x 3 1/2" x 31" B.A.	30"	BRACKETS AT TOP ONLY	NONE	NONE	4'-6"
Forecastle Bulkhead	✓ 37"	✓ 37"	3" x 3" x 37" B.A.	28"	NONE	24" x 54"	19"	4'-6"
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓ 37"	✓ 30"	3" x 3" x 31" B.A.	30"	BRACKETS AT TOP ONLY	23" x 54"	18"	4'-3"
Exposed Machinery Casings on Superstructure Decks	✓	✓	✓	✓	✓	✓	✓	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	✓	✓	✓	✓	✓	✓	✓
Deckhouses on <sup>4, 9, DECK</sup> Flush Deck Ships	✓ 37"	✓ 31"	4 1/2" x 37"	30"	BRACKETS AT TOP AND BOTTOM	21 1/2" x 39"	19"	4'-6"

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

Poop Bulkhead	✓
Raised Quarter Deck Bulkhead	<b>NONE</b> No Springs
Bridge, After Bulkhead	<b>NONE</b> No Springs
Bridge, Forward Bulkhead	<b>NONE</b> No Springs
Forecastle Bulkhead	1 1/2" Wood doors, hinged, operated from both sides
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	25" hinged steel doors, operated from both sides
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on <sup>4, 9, DECK</sup> Flush Deck Ships	On Starboard Side of deck house between Nos 4 & 5 bulkheads, door to escape from No 5 hold, 34" hinged steel door, wedge fastening, operated from both sides

*Caledon*

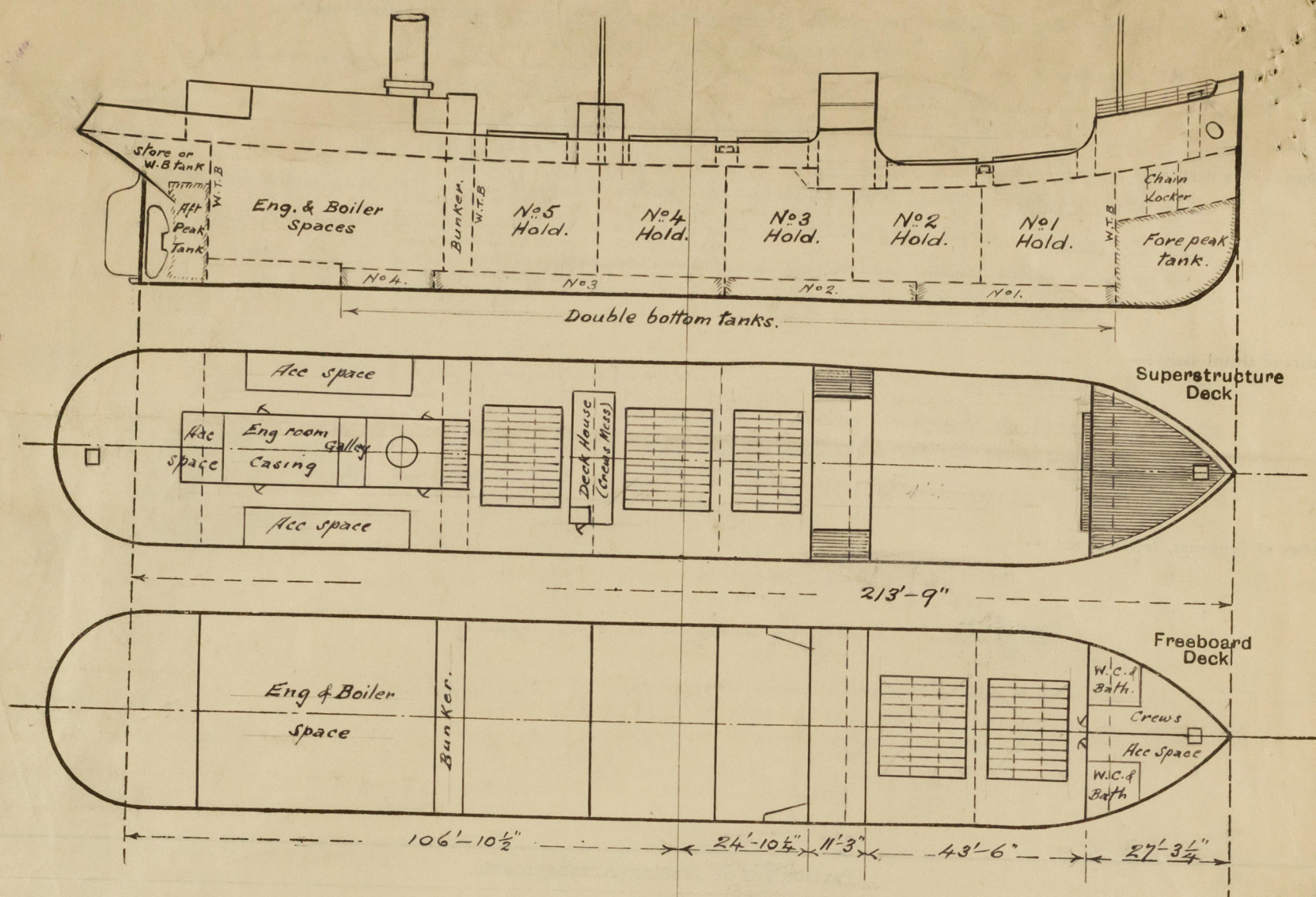
© 2021

Lloyd's Register Foundation

002085-002093-00234



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:—



Cargo vessel, usually employed in the coal trade between Sydney N.S.W. and N.S.W. Ports, cruised afloat, without any portion of a Special Permit.

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

On Freeboard Deck:—

Escape hatchway, between Nos 1 & 2 hatchways, to Nos 1 & 2 Holds, opening 2'-8" x 2'-9", height of coaming 30", 3" wood coams, 2 1/2" rists, with cleats, battens, and two tarpaulins.

On Raised Quarter Deck:—

Escape hatchway, between Nos 3 & 4 hatchways, to Nos 3 & 4 Holds, opening 2'-8" x 2'-9", height of coaming 30", 3" wood coams, 2 1/2" rists, with cleats, battens, and two tarpaulins.

Ash dump in way of Stokelhold, Starboard Side, opening 2'-0" x 1'-0" with 48" coaming & fitted with 34" lugged steel coam, secured by screws and wing nuts.

Hatchway to deck sties, at after end of after deck house, opening 3'-0" x 2'-0", height of coaming 24", with 34" lugged steel coam & joint, secured by screws and wing nuts.

On Forecastle Deck:—

Hatchway to chain locker, trunked through freeboard deck, opening 2'-3 1/2" x 1'-4", height of coaming 12", with 34" lugged steel coam, & joint, secured by screws and wing nuts.

On Forward end of Machinery Coaming:— Bunker hatchway, opening 5'-9" x 13'-11", height of coaming 12", with 3" wood coams fitted fore & aft, 3" rists, Cleats spaced 24" to 30", battens, and 2 tarpaulins. <sup>13'-6" ABOVE R.Q.D.</sup> <sup>21'-6"</sup> <sup>2 1/2"</sup> <sup>Plating of coaming above machy. casing .38"</sup> <sup>Stiffens 7" B.A. spaced 24" to 27" continuous from R.Q.D. to fore end of coaming.</sup> <sup>Angle tie bars fitted between stiffens on forward and after ends of hatchway.</sup> <sup>2 1/2" thick.</sup>

Builder's name and yard number Burntisland S.B. Co. Ltd. No 140

Names of sister ships None

Owners Australian Steamships Proprietary Ltd. Man Agents:— Howard Smith Ltd.

Fee £ 10 : 0 : 0 Received by me



© 2021

Lloyd's Register Foundation