

# WRECK SECTION

Rpt. C.I.L.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

W1026-0129 1/2

Index No.

23894

(For London Office only)

No. 575

1862

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~

having Poop, Bridge and Forecastle.

Port of Survey NAGASAKI.

(Type of Superstructures.)

Date of Survey 30th December 1932.

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

S.S. "TAH CHEE"

London Hong Kong

136066

6508

1914-9

Name of Surveyor H.D. Buchanan.

Moulded Dimensions: Length 419.50 Breadth 54.25 Depth 32.71

Moulded displacement at moulded draught = 85 per cent. of moulded depth 14420 tons

Coefficient of fineness for use with Tables 798

Particulars of Classification \*IOCAI.

Carrying Petroleum in Bulk.  
S.S. Fo. No. 3-4, 26; S.S. L. Am. No. 1-30

Depth for Freeboard (D)

Moulded depth ... .. 32.71

Stringer plate ... .. 0.62"

Sheathing on exposed deck 2 1/2" wood (Fore & Aft)

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

Depth for Freeboard (D) = 32.76

Depth correction

(a) Where D is greater than Table depth

(D - Table depth) R =  $(32.76 - 27.96) \times 3.0 = (+) 14.40$

(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) 54.25

Standard Round of Beam =  $\frac{B \times 12}{50} = 13.02$

Ship's Round of Beam = 13 1/2"

Difference beam 48

Restricted to

Correction =  $\frac{\text{Diff}^*}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{48}{4} \times \left( 1 - \frac{54.9}{419} \right) = -0.07$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	<u>118.25</u>	<u>118.25</u>	<u>7'-6"</u>	-	<u>118.25</u>
" overhang ... ..					
R.Q.D. enclosed ... ..					
" overhang ... ..	<u>25.99</u>	<u>25.99</u>	<u>7'-6"</u>	-	<u>25.99</u>
Bridge enclosed ... ..	<u>25.99</u>	<u>25.99</u>	<u>7'-6"</u>	-	<u>25.99</u>
" overhang aft ... ..	<u>2.01</u>	<u>2.01</u>			<u>2.01</u>
" overhang forward ... ..	<u>2.29</u>	<u>2.29</u>			<u>2.29</u>
Fore enclosed ... ..	<u>40.35</u>	<u>40.35</u>	<u>7'-6"</u>	-	<u>40.35</u>
" overhang ... ..	<u>2.31</u>	<u>2.31</u>			<u>2.31</u>
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" forward ... ..					
Total ... ..	<u>194.08</u>	<u>189.20</u>			<u>189.20</u>

Standard Height of Superstructure 7'-6"

" " R.Q.D. —

Deduction for complete superstructure 42.00

Percentage covered  $\frac{S}{L} = 46.27\%$

" "  $\frac{S_1}{L} = 45.10\%$

" "  $\frac{E}{L} = 45.10\%$

Percentage from Table, Line A Tanker 36.10  
(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 =  $42.00 \times .361 = - 15.16$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<u>51.95</u>	1		<u>51.95</u>	<u>50.5"</u>	<u>50.50</u>	1		<u>50.50</u>
1/4 L from A.P. ... ..	<u>23.12</u>	4		<u>92.48</u>	<u>18 7/8</u>	<u>21.33</u>	4		<u>85.32</u>
2/4 L " ... ..	<u>5.71</u>	2		<u>11.42</u>	<u>3 3/4</u>	<u>5.32</u>	2		<u>10.64</u>
Amidships ... ..		4			<u>0</u>		4		
3/4 L from F.P. ... ..	<u>11.43</u>	2		<u>22.86</u>	<u>10 1/8</u>	<u>10.54</u>	2		<u>21.08</u>
1/4 L " ... ..	<u>46.24</u>	4		<u>184.96</u>	<u>39 5/8</u>	<u>42.26</u>	4		<u>169.04</u>
F.P. ... ..	<u>103.90</u>	1		<u>103.90</u>	<u>104 1/2</u>	<u>108.00</u>	1		<u>108.00</u>
Total ... ..				<u>467.57</u>					<u>444.58</u>

Mean actual sheer aft = Deficient  
Mean standard sheer aft = Deficient

Mean actual sheer forward = Deficient .962  
Mean standard sheer forward = Deficient .962

Length of enclosed superstructure forward of amidships =

aft of " =

Forward Sheer  
Standard Actual  
11.43 3 34.29 10.54 2 31.62  
46.24 3 138.72 42.26 3 126.78  
103.90 1 103.90 108.00 1 108.00  
467.57 276.91 266.40

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{21} \right) = \frac{467.57}{18} \left( \frac{75-21.1}{21} \right) = \frac{22.93}{18} \left( \frac{53.9}{21} \right) = (+) .66$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.

Depth to Freeboard Deck = 32.76

Summer freeboard = 6.08

Moulded draught (d) = 26.68

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches =  $6.67 = 6 \frac{3}{4}$

Addition for Winter North Atlantic Freeboard (if required) =

4.19 = 4 1/4

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 14,114$

Tons per inch immersion at summer load water line

$T = 47$

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

7.50

7 1/2

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

67  
73  
-6"

Depth Correction ... .. 14.40

Deduction for superstructures ... .. 15.16

Sheer correction ... .. 66

Round of Beam correction ... .. 07

Correction for Thickness of Deck amidships ... ..

Other corrections, scantlings, etc. ... ..

Summer Freeboard = 72 1/4

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

Tropical Fresh Water Line above Centre of Disc ... ..	<u>14 1/4</u>
Fresh Water Line " " ... ..	<u>7 1/2</u>
Tropical Line " " ... ..	<u>6 3/4</u>
Winter Line below " " ... ..	<u>6 3/4</u>
Winter North Atlantic Line " " ... ..	<u>6 3/4</u>

Tropical Fresh Water Freeboard ... ..	<u>41.104</u>
Fresh Water " " ... ..	<u>5.52</u>
Tropical " " ... ..	<u>6.64</u>
Winter " " ... ..	<u>7.24</u>
Winter North Atlantic " " ... ..	<u>7.24</u>

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# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway		1 off To Hold	20 Cargo tanks	10 Summer tanks	6.H. Locker Hatch	To F.P. Store	Coal Hatches on Poop Deck	2 of Cofferdam Hatch on Poop	2 of Oil Bunker P80p Dk in Poop	2 off Hatch in Poop	
Dimensions of Hatchway		9'0" x 10'0"	6'0" x 5'0"	6'17" x 3'16"	24' x 27"	30' x 30"	72' x 36"	68' x 120"	58' x 34"	58' x 34"	60' x 48"
COAMINGS	Height above Deck	23 1/2"	18 1/2"	3'-6"	9x3x-7" BA	9x3x-7" BA	27"	30"	10 1/2 x 3 1/2 BA	10 1/2 x 3 1/2 BA	10x3x-7" BA
	Thickness	.40	.40	.44	.44	.40	.40	.40	.40	.40	.40
	Sides	.40	.40	.44	.44	.40	.40	.40	.40	.40	.40
	Stiffeners	.40	.40	.44	.44	.40	.40	.40	.40	.40	.40
Brackets, Stays											
HATCH BEAMS	Number										
	Spacing										
	Scantling and Sketch										
	Bearing Surface	None	None	None	None	None	None	None	None	None	None
FORE AND AFTERS	Number										
	Spacing										
	Unsupported Lengths										
	Scantling* and Sketch										
HATCH COVERS	Material	Steel	Steel	Steel	Wood	Wood	Wood	Wood	Steel	Steel	Steel
	Thickness	.50	.50	.50	3"	3"	3"	3"	.50	.50	.50
	How fitted	Efficiently Stiffened	Efficiently Stiffened	Efficiently Stiffened	Fore & Aft.	Fore & Aft.	Fore & Aft.	Fore & Aft.	Efficiently Stiffened	Efficiently Stiffened	Efficiently Stiffened
	Bearing Surface	& W.T.	& O.T.	& O.T.	3"	3"	3"	3"	& O.T.	& O.T.	& O.T.
Spacing of Cleats					18"	20"	24"	24"			
Number of Tarpaulins					1	1	2	2			

\*Are wood fore and afters steel shod at all bearing surfaces?   
 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**

Particulars of fiddle, funnel and ventilator coamings:—

Stockhold gratings covered by strong steel hinged covers.   
 Fiddle & funnel ventilators in good and efficient condition.   
 Engine room skylight steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

Engineers Mess room Skylight coaming on poop deck on front of steering engine house opening in deck 21"x84". Coaming 15" high x 30" thick.   
 Closed by means of wood cover, with glass protected by brass bars and Canvas covering.

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

**Deck:—**   
 1- 6" dia to main dk coamings 10"x.30"   
 2- 12" " " " 30"x.30"   
 3- 14" " " " 26"x.30"   
 4- 4" goose neck vent to A.P.Store 12" above Dk.   
 5- 4" room vent 6" dia to accommodation spaces.   
 6- 4" air pipes to aft cofferdam 35" above Dk.   
 Ventilators constructed in accordance with the Rules and closed by weed plugs and canvas covers or plates with W.T.joint.   
 Ventilators in exposed positions on freeboard, raised quarter, or superstructure decks:—   
**Deck:—**   
 1- 3 1/2" dia to aft peak tank 36" above deck.   
 2- 2" dia on top of Hatch cover to O.F. bunker 30" above deck.   
**Bridge Deck:—** 2 vents 9 1/2" dia to Main Dk Coaming 21"x.30"   
 1 mushroom vent 6" dia Coaming 11" high x 8"   
**Fore'le Dk:—** 1 vent 18" dia Coaming 32"x.38 to Hold.   
 2 " 9" " " 24"x.30 to Crew Space.   
 3 " 6" " " 36"x.30 "   
**Forward Well:—** 9 goose neck vents 3"x5" oval 16" high   
 1 vent 18" dia Coaming 32"x.38 to Hold.   
 2- 6" dia goose neck vents to coff. 34" above dk.   
**Forecastle Deck:—** 1- 6" dia 36" above deck to F.P.tank.   
**Forward Well Deck:—** 4- 2" dia 6'-0" above deck to Deep oil tank.   
 Efficient Means of Closing provided (See Rpt-CH(a) dated 2/3/38)

Particulars of Gangway Cargo and Coaling Ports:—

None.



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## Particulars of Scuppers and Sanitary Discharge Pipes —

2 off 4" dia. From Seamen's W.C. in Forecastle storm valve situated in tween decks.  
 2 " 4" " " Officer " in Bridge " " " Bridge side plating.  
 1 " 4" " " Engineer " in Poop " " " Poop side plating.  
 2" discharge pipes from Bath rooms galleys &c in Poop, Bridge & Forecastle.  
 Only soil pipes fitted with brass storm valves on ship sides & efficient traps at inner ends,  
 All in good condition.

## Particulars of Side Scuttles:

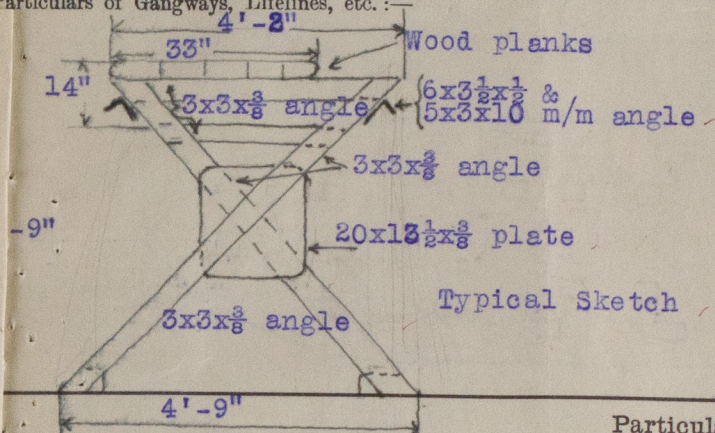
6 side scuttles 9" dia (3 P & 3 S) fitted below freeboard deck in Screw space forward-  
 fitted with dead light, all side lights fitted with hinged dead lights in Poop, Bridge & Forecastle.  
 All scuttles of substantial construction.

## Particulars of Guard Rails:—

Guard rails on Poop & Bridge 3'-4" high with 3 rods and stanchions about 3'-6" apart.  
 " " " Forecastle 3'-4" " " 2 rods " " 3'-4" apart.

Steel Bulwarks on freeboard deck for full length in wells 3'-6" high strongly constructed  
 and supported.

## Particulars of Gangways, Lifelines, etc.:—



Gangway fitted from Poop to Bridge, & from Bridge to Forecastle efficiently supported having stanchions with wire rope, hand rail 3'-0" high.

## 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 ...	122'-8"	3'-6"	47" x 21	17	105.4	107 1/2
Forward Well ...	104'-0"	3'-6"	47" x 21	14	86.8	91 1/2

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:— 2 Horizontal 1 1/4" dia bars.

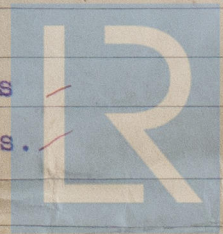
Additional area where sheer is less than standard.

## 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 ...	.30	.30	3 1/2 Flanged	42"		--	--	7'-6"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...			3x3x.38	39"	Bracketed top	48" x 34"	24"	7'-6"
Bridge, Forward Bulkhead ...	.50	.50	6x3x.40	39"	Bracketed	48" x 34"	24"	
Forecastle Bulkhead ...	.30	.30	4" Flanged	39"		72" x 60" 60" x 24"	None 18"	7'-6"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks ...	.30		3 1/2 x 3 x .30	32"	Bracketed	62" x 24"	15"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	.30		4 1/2 x 3 x .38	30"	Bracketed	60" x 26" 60" x 24"	18" 6"	7'-6"
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead ...	None
Raised Quarter Deck Bulkhead ...	-
Bridge, After Bulkhead ...	One hinged steel W.T. door operated from both sides.
Bridge, Forward Bulkhead ...	2 Hinged steel W.T. door operated from both sides.
Forecastle Bulkhead ...	Storm board fitted in channels 1/2 height 1 1/2 thick and steel doors operated from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks ...	Hinged steel doors operated from both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	Hinged steel doors operated from both sides.
Deckhouses on Flush Deck Ships ...	



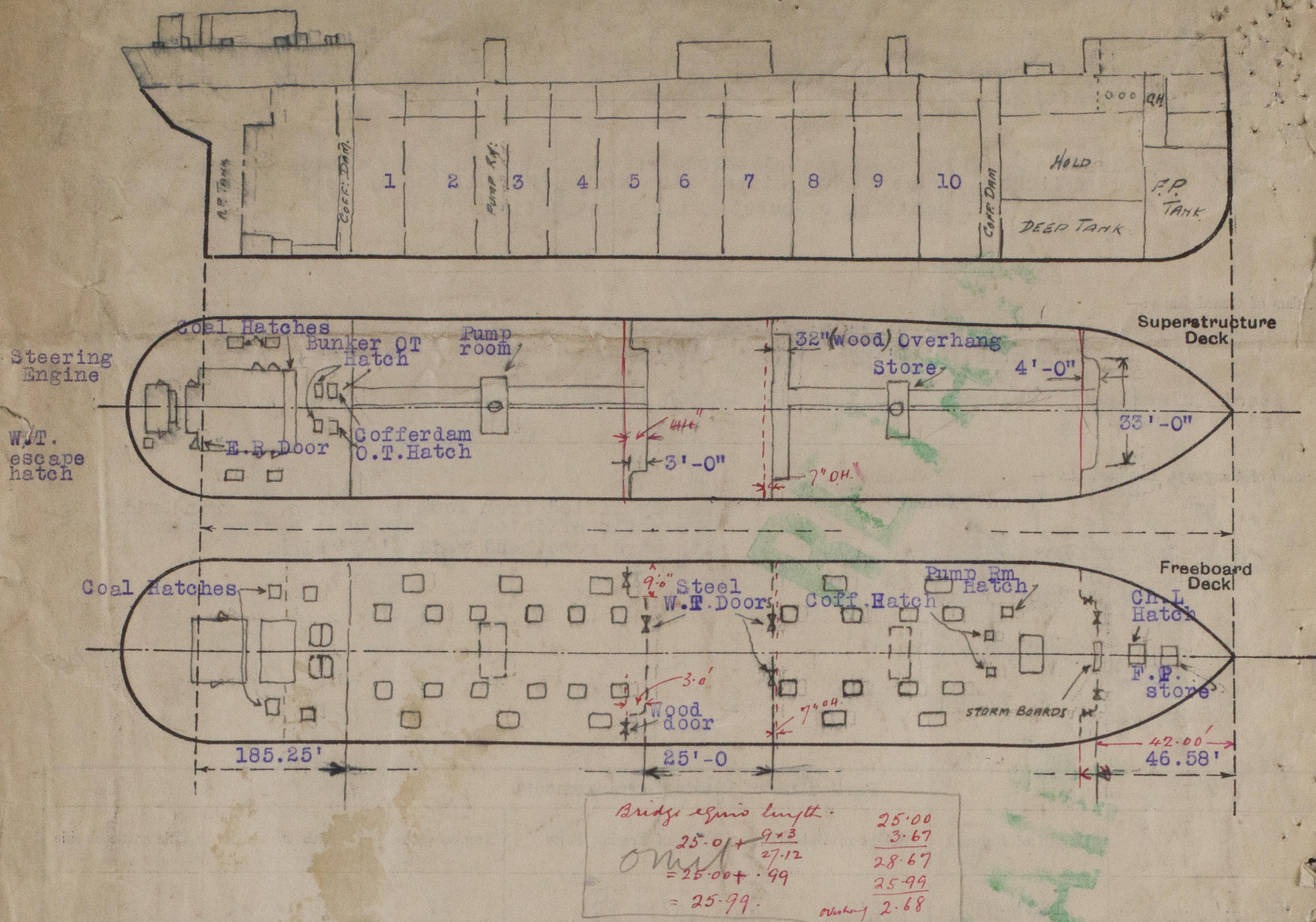
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*Takcher*

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:— Longitudinal Framing.

Vessel examined in dry dock and all requirements for an annual survey complied with.

Builder's name and yard number Sir R. Dixon & Co., Middlesbro'

Names of sister ships /

Owners Standard Transportation Co., Ltd.,

Fee £ 371:00

Received by me 6th January 1933.

*A. Buchanan*



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