

29 APR 1932

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Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Poop, Bridge & ForecastlePort of Survey Birkenhead

(Type of Superstructures.)

Date of Survey April 22nd 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

SAN UBALDOBritish
London1452236128.80
59991921-4Name of Surveyor H. B. MurrayMoulded Dimensions: Length 411'-6" Breadth 53'-4" Depth 31'-0"Moulded displacement at moulded draught = 85 per cent. of moulded depth 13035 tonsCoefficient of fineness for use with Tables 792Particulars of Classification +100 A1 Carrying Petroleum in bulk.

Depth for Freeboard (D)

Moulded depth 31'-0"Stringer plate 07
84

Sheathing on exposed deck

 $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 31.07

Depth correction

(a) Where D is greater than Table depth

(D-Table depth) R = $(31.07 - 27.44) \times 3$ = $3.63 \times 3 = 10.89 +$

(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) 53'-0"Standard Round of Beam = $\frac{B \times 12}{50} = 12.74$ Ship's Round of Beam = 11"Difference Defect = 1.74

Restricted to

Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.74}{4} \left(1 - \frac{59.16}{408.4} \right) = 0.26$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>110'-6"</u>	<u>110.5</u>	<u>7'-6"</u>		<u>110.5</u>
" overhang					
B.Q.D. enclosed					
" overhang					
Bridge enclosed <u>House</u> <u>apart</u> <u>34'-7"</u>	<u>34'-7"</u>	<u>17.29</u>	<u>7'-6"</u>		<u>17.29</u>
" overhang aft					
" overhang forward					
Forecastle enclosed <u>See Sketch</u> <u>4'-6"</u>	<u>40.28</u> <u>45'-0"</u> <u>4'-6"</u>	<u>40.28</u>	<u>7'-6"</u> <u>7'-6"</u>		<u>40.28</u>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	<u>185.36</u>	<u>168.07</u>			<u>168.07</u>

Standard Height of Superstructure 7.50" " R.Q.D. ✓Deduction for complete superstructure 42.00Percentage covered $\frac{S}{L} = 45.04\%$ " " $\frac{S_1}{L} = 40.84\%$ " " $\frac{E}{L} = 40.84\%$

Percentage from Table, Line A.

(corrected for absence of forecastle (if required)) ✓Percentage from Table, Line B. Tanker 31.84%

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $42 \times 31.84 = 13.37$

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P.	<u>51.16</u>	<u>1</u>	<u>51.16</u>	<u>46"</u>	<u>46.50</u>	<u>1</u>	<u>46.50</u>
$\frac{1}{2}$ L from A.P.	<u>22.77</u>	<u>4</u>	<u>91.08</u>	<u>14"</u>	<u>18.76</u>	<u>4</u>	<u>75.04</u>
$\frac{3}{8}$ L "	<u>5.63</u>	<u>2</u>	<u>11.26</u>	<u>2.75"</u>	<u>4.69</u>	<u>2</u>	<u>9.38</u>
Amidships		<u>4</u>				<u>4</u>	
$\frac{3}{8}$ L from F.P.	<u>11.26</u>	<u>2</u>	<u>22.52</u>	<u>9"</u>	<u>10.64</u>	<u>2</u>	<u>21.28</u>
$\frac{1}{2}$ L "	<u>45.53</u>	<u>4</u>	<u>182.12</u>	<u>40.25"</u>	<u>42.56</u>	<u>4</u>	<u>170.24</u>
F.P.	<u>102.32</u>	<u>1</u>	<u>102.32</u>	<u>103"</u>	<u>103.00</u>	<u>1</u>	<u>103.00</u>
Total			<u>460.46</u>				<u>425.44</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{35.02}{18} \left(75 - \frac{52.48}{2252} \right) = +1.02$ ✓

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 = 31.07Summer freeboard = 5.79Moulded draught (d) = 25.28

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.32 6 $\frac{1}{2}$ "Addition for Winter North Atlantic Freeboard (if required) = 4.12 = 4"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 12530$

Tons per inch immersion at summer load water line

 $T = 44.6$ Deduction = $\frac{\Delta}{40T}$ inches= 7.02

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

 $\frac{792 + 68}{1.36} = \frac{1.472}{1.36}$ Depth Correction 10.89Deduction for superstructures 13.37Sheer correction 1.02Round of Beam correction 26

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

Summe

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

Tropical Fresh Water Line above Centre of Disc	<u>13$\frac{1}{2}$"</u>
Fresh Water Line " "	<u>7"</u>
Tropical Line " "	<u>6$\frac{1}{2}$"</u>
Winter Line below " "	<u>6$\frac{1}{2}$"</u>
Winter North Atlantic Line " "	<u>10$\frac{1}{2}$"</u>

Tropical Fresh Water Freeboard	<u>65.30</u>
Fresh Water " "	<u>70</u>
Tropical " "	
Winter " "	
Winter North Atlantic " "	

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Description of Hatchway	FORE HOLD	28 OT Hatches	FORECASTLE HATCH	POOP SPACE HATCH	OIL FUEL BUNKER	OIL BUNKER	OIL FUEL BUNKER	COAL HATCH	POOP SPACE	FORE HOLD
Dimensions of Hatchway	12'-0" x 10'-0"	5'-8" x 3'-8"	4'-0" x 2'-0"	6'-0" x 4'-0"	3'-0" x 2'-6"	3'-0" x 2'-9"	3'-0" x 3'-0"	3'-0" x 3'-3"	2'-9" x 2'-6"	2'-7" x 1'-4"
COAMINGS										
Height above Deck	30"	36"	26"	30"	30"	30"	30"	30"	28"	29"
Thickness	4/4"	4/4"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Sides	7 x 3 x 3/4 BA	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stiffeners	each side	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brackets, Stays	each end	✓	✓	✓	✓	✓	✓	✓	✓	✓
HATCH BEAMS										
Number	2									
Spacing	4'-0"									
Scantling and Sketch	plate 13" x 3/8"	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bearing Surface	3 1/2"									
FORE AND AFTERS										
Number										
Spacing										
Unsupported Lengths										
Scantling* and Sketch										
Bearing Surface										
HATCH COVERS										
Material	Steel	Steel	WP	WP	Steel	Steel	Steel	WP	WP	WP
Thickness	3/16"	.50"	3"	3"	.50"	.35"	.35"	3"	2 1/2"	3"
How fitted	Part Riveted	✓	FLA	Shwarthips	✓	✓	✓	Shwarthips	Solid	Solid
Bearing Surface	HT Pitch	✓	2 1/2"	1 1/2"	✓	✓	✓	2 1/2"	2"	2 1/2"
Spacing of Cleats										
Number of Tarpaulins			19"	30"	✓	✓	✓	20"	19"	20" x 12"
			2	3	✓	✓	✓	2	2	2
<p>*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> Yes</p> <p>Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Yes</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Yes</p> <p>Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/> None</p>										

Particulars of fiddle, funnel and ventilator coamings:—

Fidley, funnel & ventilator coamings in efficient condition.
Fidley gratings fitted with steel hinged covers. CR Skylights strongly constructed
of steel with steel hinged flaps.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

2 Steel Companionways from Poop Deck leading to Engineers & Crews Accomms.
Strong wood hinged doors 4'-10" x 2'-0" sills 15". Manipulated from both sides.

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

2-23" Vents, coamings 3'-0" x 3/8" on Poop Deck leading to Boiler Room.
2-12" Vents, coamings 2'-6" x 1/4" on Poop Deck leading to Poop Space.
14-8" Vents coamings 2'-4" x 1/4" on Poop Deck leading to Alleyways.
2-8" Vents coamings 2'-3" x 1/4" on Poop Deck leading to Accomms.
1-8" Vent coaming 2'-6" x 1/4" on Poop Deck leading to Stores in Poop.
1-8" Vent coaming 2'-6" x 1/4" on Poop Deck leading to A Peak Space.
1-8" Vent coaming 2'-6" x 1/4" on Poop Deck leading to Steering flat.
Wood plugs & Canvas covers for all Vents.

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

6" high to F Peak Tank on Forecastle Deck.
6" high to Fore Deck on Foreboard Deck.
20" high to Fore Deck on Foreboard Deck.
20" high to Aft Cofferdam on Foreboard Deck.
14" high to Bunkers on Poop Deck.
2-3 1/2" air pipes 6" high to D Bottom on Poop Deck.
2-3 1/2" air pipes 6" high to E.H. D. Bottom on Poop Deck.
1-3 1/2" air pipe 6" high to Aft Peak Tank on Poop Deck.
Wood plugs
Canvas covers
to all air pipes
No Closing Appliances
No Surfing Holes.

Way Cargo and Coaling Ports:—



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Particulars of Scuppers and Sanitary Discharge Pipes :-

Stringer Scuppers of "x 4".
Scuppers from poop deck, open pipe scuppers through ships side above freeboard deck.
All Sanitary discharge pipes fitted with Storm Valves at the ships side.

Particulars of Side Scuttles :-

All Side Scuttles are above the freeboard deck and are of Substantial Construction.
Provision is made for deadlights on all Side Scuttles but in the Poop space and Steering Flat.
Some have no deadlight fitted.

Particulars of Guard Rails :-

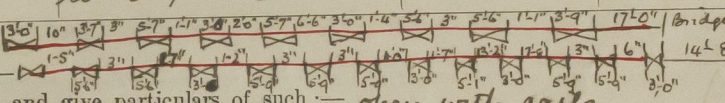
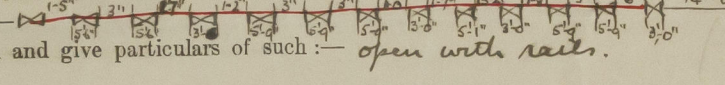
On Forecastle Deck 3'-1" high stanchions spaced 4'-9" 2 rails.
On Poop Deck 3'-1" high stanchions spaced 4'-3" 3 rails.

Particulars of Gangways, Lifelines, etc. :-

See Sketch Onleaf.

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	90'-4"	3'-5 1/2"	From 3'-0" x 5'-7" x 2'-3"	9.	81 sq. ft.	78.2 sq. ft.
Forward Well	131'-6"	3'-5 1/2"	From 3'-0" x 5'-9" x 2'-3"	13	130 sq. ft.	113.7 sq. ft.

State position of each freeing port (F. and A. position and height above deck edge) } After Well :-  } Forward Well :-  } Forecastle Bulkhead

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- *open with rails.*

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

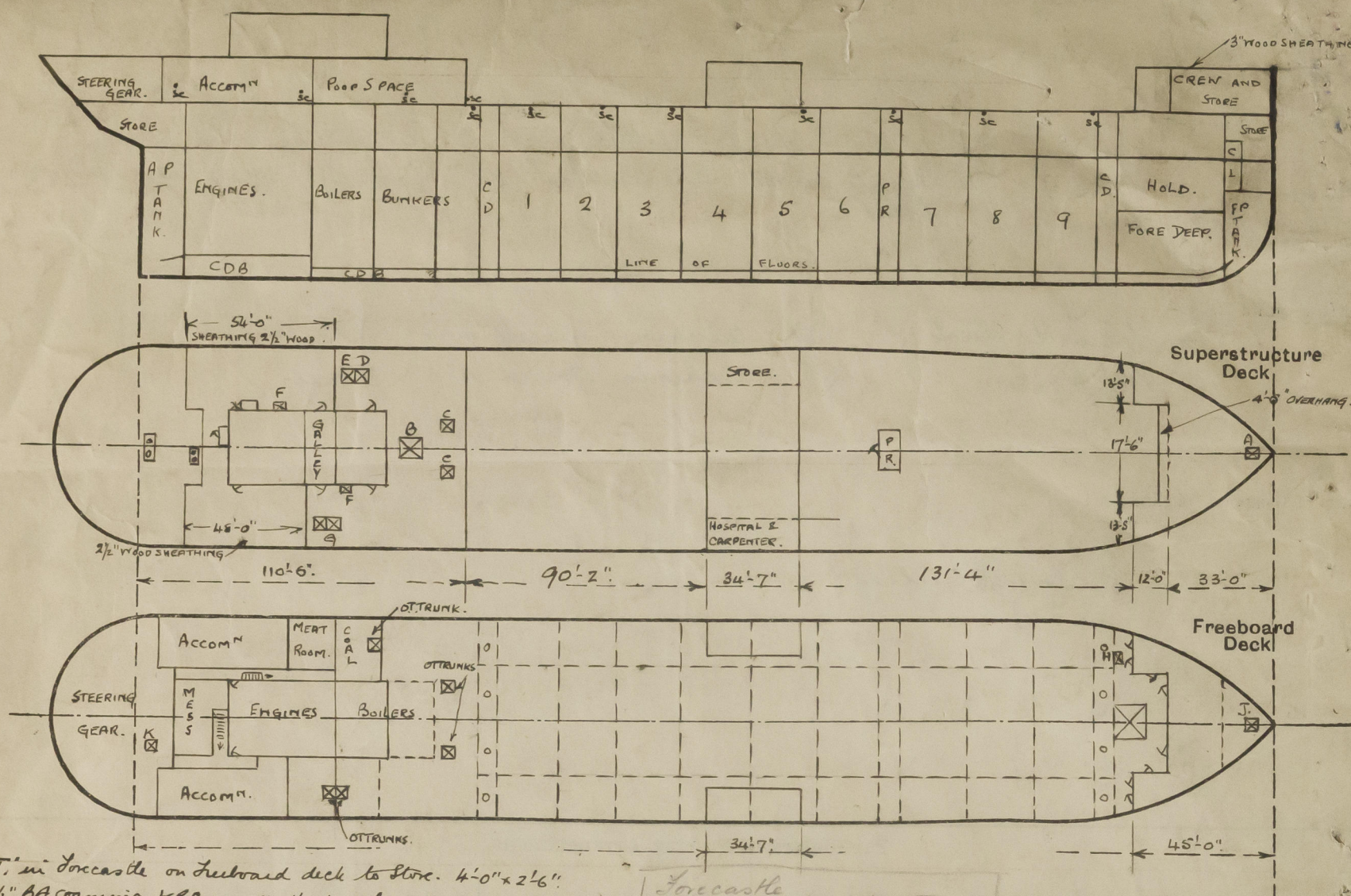
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	.38	11 x 3 1/2 x 1/2 BA.	36"	Brackets at top & bottom.	4'-11" x 2'-8"	18"	7'-6"
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	✓							
Bridge, Forward Bulkhead	✓	.35	4 x 3 x 3/8	36"	None	4'-6" x 2'-5"	18 1/2"	7'-6" steel to steel
Forecastle Bulkhead								
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks50	.35	4 x 3 x 3/8	2'-2"	None	4'-8" x 2'-3"	9"	7'-6"
Exposed Machinery Casings on Superstructure Decks38	.35	4 x 3 x 3/8	2'-2"	Brackets at top	2 at 4'-6" x 2'-0" ER 2 at 4'-6" x 2'-6" ER 2 at 4'-10" x 3'-0" companions.	18" 14" 15"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships ...	✓							

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

Poop Bulkhead	<i>Riveted channels full height. No shifting boards.</i> <i>1/2" steel plates bolted with 1" hook bolts spaced 13" apart.</i>
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	<i>Strong wood & steel hinged doors Manipulated from both sides.</i>
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	<i>Strong steel hinged doors Manipulated from both sides.</i>
Exposed Machinery Casings on Superstructure Decks	<i>BR & Gidley Doors Strong steel hinged Manipulated from both sides.</i> <i>Companions, Strong wood hinged doors Manipulated from both sides.</i>
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships ...	✓

San Ubaldo

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 shown on the following sketches:—



Hatch "J" in Forecastle on Freeboard deck to Store. 4'-0" x 2'-6"
 7/8" x 3/4" BA Coaming. HP Cover 2 1/2" thick 3" bearing, no cleats or covers.
 Hatch "K" on Freeboard Deck in Steering flat to Store. 2'-6" x 2'-3"
 3/4" x 3/4" x 3/8 Coaming angle. 2 1/2" solid cover, no cleats or covers.

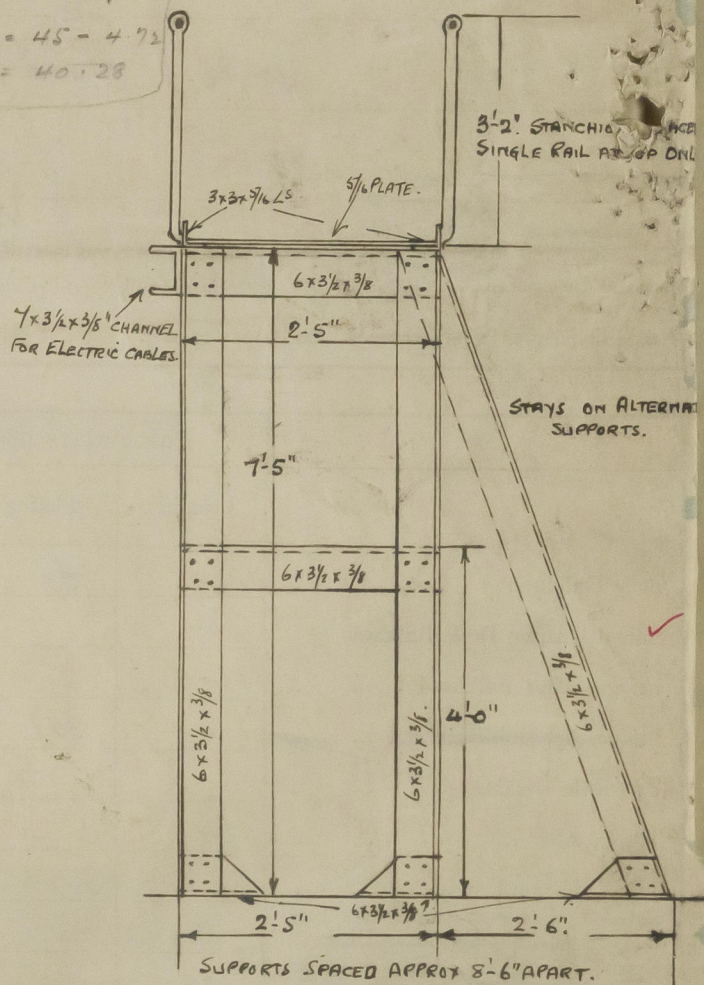
Forecastle
 Envr. Length
 $= 45 - \frac{17.5 \times 12}{44.5} = 45 - 4.72 = 40.28$

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

- Pump room strongly constructed of steel with steel hinged skylights.
- Pump room Door HT Pattern. 4'-6" x 2'-0" sill 18" cleat handles spaced 19" manipulated from both sides.
- Two skylights on Poo Deck strongly constructed of steel with steel hinged flaps to Mess Room + Steering Gear flat.
- Small access hatch fitted on top of Fore Hold Hatch. 4'-6" x 3'-9" Coaming 7/8" x 3/4" x 1/2" angle. No steel cover stiffened. Water Light and Secured by 8 wing nuts.

N.B. Vessel in Dry Dock for Freeboard and Part Special Survey.

OK 17



Builder's name and yard number Standard S B Corp Shooters Island N.Y.

Names of sister ships San Libuncio San Leonardo

Owners Eagle Oil & Shipping Co Ltd

Fee £ 13 : 12 : 0

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OK 17



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