

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for ~~Steamer, Fishing Ship, Tanker~~
having Poop, Trunk, Forecastle

(Type of Superstructures.)

Ship's Name S.S. "INVERCORRIE"	Nationality and Port of Registry Venezuelan Maracaibo	Official Number 64446 in R.B.	Gross Tonnage 1126	Date of Build 1918-5
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Port of Survey Aruba, N.W.I.
Date of Survey December 3rd 1932
Name of Surveyor E. S. Whitham

Moulded Dimensions: Length 210'0" Breadth 34'0" Depth 16'6 1/2"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 2231 tons
Coefficient of fineness for use with Tables .778

Particulars of Classification +100 Al with freeboard. S.S. Co. No 3-S.31. Carrying petroleum in bulk.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <u>16'54"</u>	(a) Where D is greater than Table depth (D-Table depth) R = <u>(16.58-14.00) 1.6151 = 4'17"</u>	Moulded Breadth (B) <u>34</u>
Stringer plate ... <u>0'03"</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>2.58</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{8.16 \text{ ms}}{50} = 9.0 \text{ ms}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>9.0 ms</u>
Depth for Freeboard (D) = <u>16'6 1/2"</u>		Difference <u>.84</u>
		Restricted to <u>.84</u>
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.84}{4} \left(1 - \frac{280}{1196} \right) = .06$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>52.75</u>	<u>52.75</u>	<u>7'0"</u>		<u>52.75</u>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...	<u>40.00</u>				
F'cle enclosed ...	<u>44.5</u>	<u>40.00</u>	<u>7'0"</u>		<u>40.00</u>
" overhang ...					
Trunk aft ...	<u>102.5</u>	<u>58.35</u>	<u>7'0"</u>		<u>58.35</u>
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>92.75</u>	<u>151.10</u>			<u>151.10</u>

Standard Height of Superstructure 6.00
" " R.Q.D. -
Deduction for complete superstructure 27.0
Percentage covered $\frac{S}{L} = \frac{44.16}{100} = 44.16\%$
" " $\frac{S_1}{L} = \frac{71.96}{100} = 71.96\%$
" " $\frac{E}{L} = \frac{71.96}{100} = 71.96\%$
Percentage from Table, Line A. TANKER 65.41%
(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 = 27.00 \times .6541 = -17.66

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>31.00</u>	1		<u>31.00</u>	<u>18.00</u>	<u>18.00</u>	1		<u>18.00</u>
1/4 L from A.P. ...	<u>13.79</u>	4		<u>55.16</u>	<u>7.90</u>	<u>7.90</u>	4		<u>31.60</u>
1/2 L " ...	<u>3.41</u>	2		<u>6.82</u>	<u>1.97</u>	<u>1.97</u>	2		<u>3.94</u>
Amidships ...		4					4		
3/4 L from F.P. ...	<u>6.82</u>	2		<u>13.64</u>	<u>3.94</u>	<u>3.94</u>	2		<u>7.88</u>
1/4 L " ...	<u>27.59</u>	4		<u>110.36</u>	<u>15.80</u>	<u>15.80</u>	4		<u>63.20</u>
F.P. ...	<u>62.00</u>	1		<u>62.00</u>	<u>36.00</u>	<u>36.00</u>	1		<u>36.00</u>
Total ...				<u>278.98</u>					<u>160.62</u>

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{278.98 - 160.62}{18} = \frac{118.36}{18} = 6.575$
If limited on account of midship superstructure.

Mean actual sheer aft = Deficient
Mean standard sheer aft = Deficient
Mean actual sheer forward = Deficient
Mean standard sheer forward = Deficient
Length of enclosed superstructure forward of amidships = Tanker
" " aft of " = Tanker

Correction = $\frac{118.36}{18} = 6.575$
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.

Depth to Freeboard Deck =	<u>16.58</u>
Summer freeboard =	<u>1.37</u>
Moulded draught (d) =	<u>15.21</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches =	<u>3.80 = 3 3/4</u>
Addition for Winter North Atlantic Freeboard (if required) =	<u>2.1 = 2 1/4</u>

Deduction for Fresh Water.

Displacement in salt water at summer load water line	$\Delta = 2427$
Tons per inch immersion at summer load water line	$T = 15.19$
Deduction = $\frac{\Delta}{40T}$ inches	$= \frac{2427}{40 \times 15.19} = 3.99 = 4$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ...	<u>4.17</u>
Deduction for superstructures ...	<u>-17.66</u>
Sheer correction ...	<u>3.48</u>
Round of Beam correction ...	<u>.06</u>
Correction for Thickness of Deck amidships ...	<u>-</u>
Other corrections, scantlings, etc. ...	<u>-</u>
Summer Freeboard =	<u>16.41</u>

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

Tropical Fresh Water Line above Centre of Disc ...	<u>7 3/4"</u>
Fresh Water Line " " ...	<u>4"</u>
Tropical Line " " ...	<u>3 3/4"</u>
Winter Line below " " ...	<u>3 3/4"</u>
Winter North Atlantic Line " " ...	<u>5 3/4"</u>

Tropical Fresh Water Freeboard ...	<u>0' - 8 3/4"</u>
Fresh Water " " ...	<u>1' - 0 1/2"</u>
Tropical " " ...	<u>1' - 0 1/2"</u>
Winter " " ...	<u>1' - 8 1/2"</u>
Winter North Atlantic " " ...	<u>1' - 10 1/4"</u>

MARKING FORM

RECEIVED 24 MAY 1935

MARKING FORM

RECEIVED

-8 AUG 1935

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	10. 0.7. H.	2. 0.7. H.	2. 0.7. H.	2. 0.7. H.	2. 0.7. H.	2. 0.7. H.	2. 0.7. H.	2. 0.7. H.	2. 0.7. H.
Dimensions of Hatchway	3'6" x 3'3"	3'0" x 3'0"	3'6" x 3'6"	3'3" x 1'5"					
COAMINGS	Height above Deck	8" x 3 1/2" Ba	8" x 3 1/2" Ba	8" x 3 1/2" Ba	8" x 3 1/2" Ba				
	Thickness	3/8"	3/8"	3/8"	3/8"				
	Stiffeners	✓	✓	✓	✓				
	Brackets, Stays	✓	✓	✓	✓				
HATCH BEAMS	Number	1 top plate	1 top plate	1 top plate	1 top plate				
	Spacing	with 3 x 1/2"	with 3 x 1/2"	with 3 x 1/2"	with 3 x 1/2"				
	Scantling and Sketch	channel bar riveted to same in way of coaming for re-aligning ply.	✓	✓	✓				
	Bearing Surface	✓	✓	✓	✓				
FORE AND AFTERS	Number	Secured by 12 toggles	✓	✓	✓				
	Spacing	3" with 2" cant	✓	✓	✓				
	Unsupported Lengths	also 2" cant from coaming to mast-head.	✓	✓	✓				
	Scantling and Sketch	✓	✓	✓	✓				
HATCH COVERS	Material	Steel	Steel	Steel	Steel				
	Thickness	3/8"	3/8"	3/8"	3/8"				
	How fitted	hinged	hinged	hinged	hinged				
	Bearing Surface	0.7"	2 toggles	10 toggles	11. 7"				
Spacing of Cleats	✓	✓	✓	✓					
Number of Tarpaulins	✓	✓	✓	✓					

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

Are battens and wedges efficient and in good condition?

Are tarpaulins in good condition and in accordance with rule requirements?

Are lashings provided in accordance with rule requirements?

Particulars of fiddle, funnel and ventilator coamings:-

Engine Ventilators in efficient condition. Engine Room skylights of steel strongly constructed and in an efficient condition. Fiddle and Funnel in an efficient condition. Fiddle fitted with grating and an efficient hinged steel cover.

Particulars of Flush Bunker Scuttles:-

none

Particulars of Companionways:- one steel companionway 6'0" x 3'0" x 1'0" leading to crew accommodation etc on the upper deck and hatches to holds etc. wood door with 18" sill, capable of being manipulated from both sides.

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

Forecastle Deck 2-8" dia. 15 x 3/16 coaming to Salter's acc.
2-4" exhaust 16 x 3/16 " from " " " to Stove Room
1-6" dia. 15 x 3/16 " " to Stove Room
4-13" dia. 26 x 1/4 " " Lower Hold
6-6" " 15 x 3/16 " " Crew W.C. etc.
1-6" " 15 x 3/16 " " Upper deck above them.
1-8" " 26 x 1/4 " " Firemen's accommodation.
1-6" " 15 x 3/16 " " Boatsman's Room
1-4" exhaust 16 x 3/16 " from " " " from
Poop Deck 12-6" dia. 15 x 3/16 " to 2nd aft & aloft & steering gear.
2-8" " 15 x 3/16 " " Stores P & S.
Trunk Top 2-8" " 15 x 1/2 " " Pump Room.
Efficient Closing appliances provided

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

Forecastle Deck 1-4" dia. 10" above deck to Fore Peak Tank.
Trunk Top 10-2" dia. from Main Cargo Hatch coamings to Masthead.
" " 2-3" dia. 8" above hatch covers of after F.O. Tanks.
Poop Deck 2-3" dia. 6" above deck to after Peak Tank.
Efficient Closing appliances provided.

Particulars of Gangway Cargo and Coaling Ports:-

None

Particulars of Scuppers and Sanitary Discharge Pipes - 4 inch storm discharge valves on ship's side from 110's. all discharges from wash-basins, bathrooms etc in Poop & Forecastle fitted with storm valves on ship's side and efficient traps at the inboard end. Remaining scuppers from Poop and Forecastle fitted with storm valves on ship's side - all storm valves of best brass with brass valve and pin.

Particulars of Side Scuttles:-

all side scuttles in Poop and Forecastle fitted with efficient hinged covers with hinged deadlights permanently attached.

Particulars of Guard Rails:-

Forecastle Deck 3'6" high. 2 steel wires. Stanchions spaced 7'6"
Trunk Top " " " " " " " 6'0"
Poop Deck " " " " " " " 6'0"
Freeboard Deck " " 3 " " " " 5 to 6 ft

Particulars of Gangways, Lifelines, etc.:-

Trunk Top forms a gangway between the Poop & Forecastle

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	open rails on all weather decks.					
Forward Well						

State position of each freeing port (F. and A. position and height above deck edge) After Well:-
Forward Well:-
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:-
Additional area where sheer is less than standard.

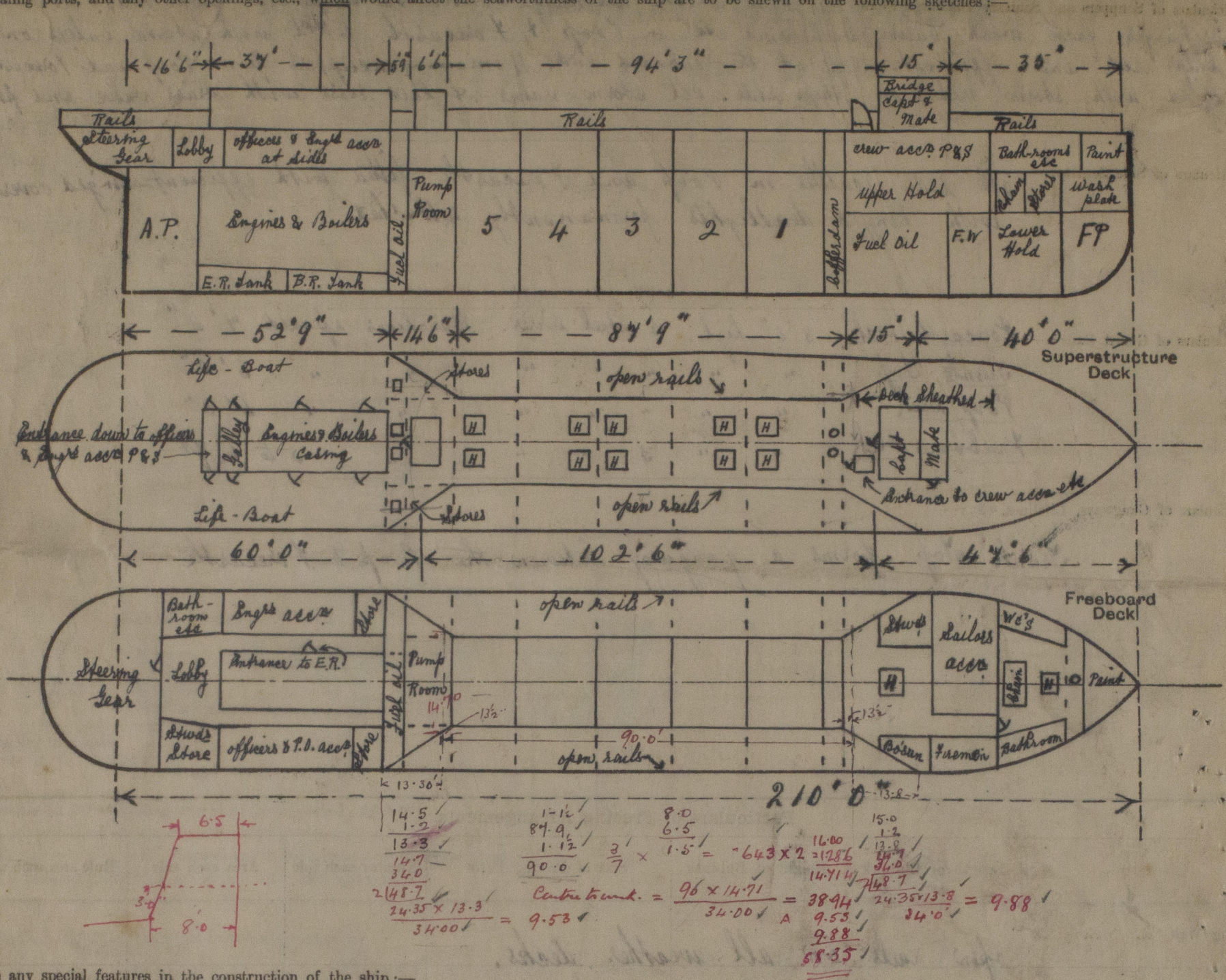
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	32 top 34 bot	6 1/2 x 3 x 3/16 BA	20" x 29"	Bkts	✓	✓	✓
Raised Quarter Deck Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead	6 x 3 x 7/16 A	36	?	?	✓	60" x 22"	16	7'0"
Bridge, Forward Bulkhead	6 x 3 x 7/16 A	36	✓	✓	✓	✓	✓	7'0"
Forecastle Bulkhead	✓	26	3 x 3 x 5/16 A	36"	✓	54 x 24	11"	7'0"
Trunk, aft	✓	32	6 x 3 x 3/16 BA	28"	Bkts	✓	✓	✓
Trunk, Forward	5 x 5 x 1/2	44	6 1/2 x 3 x 3/16 BA	28"	Bkts	✓	✓	7'0"
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Superstructure Decks	3 x 3 x 3/16 A	30	3 x 3 x 5/16 A	33" x 22"	✓	2' x 4' 6"	18"	7'0"
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	no openings.
Raised Quarter Deck Bulkhead	Steel door 2' x 4' 6" with 18" sill to Pump Room capable of being opened both sides.
Bridge, After Bulkhead	Wood door 60" x 22" with 16" sill to Capt's Room. Door capable of being manipulated both sides.
Bridge, Forward Bulkhead	Wood door 60" x 22" with 16" sill to Mate's Room on Starboard side. Door capable of being opened both sides.
Forecastle Bulkhead	Steel storm door 5'4" x 21" with 11" sill in Bkts on upper deck 4' off crew accommodation.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Steel plate stiffened by 2 x 1 x 3/16 x. Door capable of being manipulated from both sides.
Exposed Machinery Casings on Superstructure Decks	Two steel doors P & S to Fiddle with 18" sill. Two steel doors to Engine Room and 2 steel doors to Galley with 18" sill. Two wood doors with 18" sill down to officers & bag acc.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	all doors capable of being 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:—

Vessel examined and measured while lying afloat and gas free

Builder's name and yard number W. Gray & Co Ltd W. Hartlepool. Hull No. 2

Names of sister ships (ex "Palmol")

Owners Lago Petroleum Corporation.

Fee £ 7/6 150 00 Received by me _____



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