

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

469

v/s Ant. 734kg. B.S.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Antwerp</u>
having <u>Poop Bridge & Forecastle. disconnected</u>					Date of Survey <u>May 4.5 + 8. 1933.</u>
(Type of Superstructures.)					Name of Surveyor <u>H. E. Gray.</u>
Ship's Name <u>PAOLO II</u> <u>KATANGA</u>	Nationality and Port of Registry <u>Belgian</u> <u>Antwerp</u>	Official Number <u>✓</u>	Gross Tonnage <u>5188</u>	Date of Build <u>1917-12</u>	Particulars of Classification <u>+100 A1 2.31</u> <u>S. S. Ant. No. 3. 10.30</u>
Moulded Dimensions: Length <u>400.0</u> Breadth <u>52.0</u> Depth <u>31.0</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>11980.0</u> tons					
Coefficient of fineness for use with Tables <u>.765</u>					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>31.0</u>	(a) Where D is greater than Table depth (D - Table depth) R = $(31.04 - 26.67) 3.00$ <u>= + 13.11"</u>	Moulded Breadth (B) <u>52.0</u>
Stringer plate <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{52.0 \times 12}{50} = 12.48$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>✓</u>	If restricted by superstructures	Ship's Round of Beam = <u>1.08' = 13"</u>
Depth for Freeboard (D) = <u>31.04</u>		Difference <u>.52" excess</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.52}{4} \times .4984 = -.06$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>49.25</u>	<u>49.25</u>	<u>7-11½</u>		<u>49.25</u>
" overhang	<u>✓</u>				
R.Q.D. enclosed	<u>✓</u>				
" overhang	<u>✓</u>				
Bridge enclosed	<u>112.66</u>	<u>112.66</u>	<u>7-11½</u>		<u>112.66</u>
" overhang aft	<u>✓</u>				
" overhang forward	<u>✓</u>				
F'cle enclosed	<u>37.75</u>	<u>37.75</u>	<u>7-11½</u>		<u>37.75</u>
" overhang	<u>1.00</u>	<u>1.00</u>			<u>1.00</u>
Trunk aft	<u>✓</u>				
" forward	<u>✓</u>				
Tonnage opening aft	<u>✓</u>				
" forward	<u>✓</u>				
Total	<u>200.66</u>	<u>200.66</u>			<u>200.66</u>

Standard Height of Superstructure	<u>7.50'</u>
" R.Q.D.	<u>✓</u>
Deduction for complete superstructure	<u>42.00</u>
Percentage covered $\frac{S}{L} =$	<u>50.16%</u>
" $\frac{S_1}{L} =$	<u>50.16%</u>
" $\frac{E}{L} =$	<u>50.16%</u>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	<u>36.16%</u>
Interpolation for bridge less than 2L (if required)	
Deduction = $42.00 \times .3616 =$	<u>- 15.19"</u>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>50.00</u>	<u>1</u>		<u>50.00</u>	<u>60.0</u>	<u>60.00</u>	<u>1</u>		<u>60.00</u>
¼ L from A.P.	<u>22.25</u>	<u>4</u>		<u>89.00</u>	<u>27.0</u>	<u>26.84</u>	<u>4</u>		<u>107.36</u>
½ L "	<u>5.50</u>	<u>2</u>		<u>11.00</u>	<u>7.0</u>	<u>6.71</u>	<u>2</u>		<u>13.42</u>
Amidships	<u>✓</u>	<u>4</u>		<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>4</u>		<u>✓</u>
¾ L from F.P.	<u>11.00</u>	<u>2</u>		<u>22.00</u>	<u>13.20</u>	<u>13.23</u>	<u>2</u>		<u>26.46</u>
¼ L "	<u>44.50</u>	<u>4</u>		<u>178.00</u>	<u>53.0</u>	<u>52.93</u>	<u>4</u>		<u>211.72</u>
F.P.	<u>100.00</u>	<u>1</u>		<u>100.00</u>	<u>120.0</u>	<u>120.00</u>	<u>1</u>		<u>120.00</u>
Total				<u>450.00</u>					<u>538.96</u>

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{88.96}{18} \left(.75 - \frac{.2508}{2} \right) = -2.47"$$

If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 31.04
Summer freeboard = 5.94
Moulded draught (d) = 25.10

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.27 = 159%Addition for Winter North Atlantic Freeboard (if required) = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Tons per inch immersion at summer load water line

Deduction = $\frac{\Delta}{40 T}$ inches= 6.90= 175%

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction	<u>13.11</u>
Deduction for superstructures	<u>15.19</u>
Sheer correction	<u>2.47</u>
Round of Beam correction	<u>.06</u>
Correction for Thickness of Deck amidships	<u>-</u>
Other corrections, scantlings, etc.	<u>-</u>
	<u>13.11</u>
	<u>17.72</u>
	<u>- 4.61</u>
Summer Freeboard =	<u>71.36</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>334%</u>	Tropical Fresh Water Freeboard	<u>1478</u>
Fresh Water Line " "	<u>175%</u>	Fresh Water " "	<u>1637</u>
Tropical Line " "	<u>159%</u>	Tropical " "	<u>1653</u>
Winter Line below " "	<u>159%</u>	Winter " "	<u>1971</u>
Winter North Atlantic Line " "	<u>✓</u>	Winter North Atlantic " "	<u>✓</u>

KATANGA

Particulars of Scuppers and Sanitary Discharge Pipes —

Maintenance of Scuppers and Sanitary Discharge Pipes —			
<u>Fore Deck</u>	<u>Bridge Deck</u>	<u>after Deck</u>	<u>Bridge Turnin decks</u>
2 Scuppers P+S in Stringer Angle & 1 " discharges. Overboard below upper deck. No N.R.V. fitted.	2 Scuppers P+S discharge. Overboard in Bldg. T. Dks. No N.R.V. fitted ✓	2 Scuppers P+S in Stringer Angle & 1 " discharges overboard below upper deck. No N.R.V. fitted ✓	2 Scuppers P+S discharge. Overboard in Bldg T. Dks. N.R.V.'s fitted. Overboard below upper deck. No N.R.V. fitted ✓
			Captain, Officer Cooks, Wls, Bath, & crew, Wls, Wash basin & discharge overboard below upper deck aft. N.R.V.'s fitted.

2 in. Forecastle, 4 in Bridge Truss deck & 14 in port Shack.

Headlights fitted. ✓

Particulars of Guard Rails:—

7 cde 5th.	6	Rail $\frac{1}{8}$ dia	9	Rail $\frac{1}{8}$ dia	Post 5th
	7	wire	9	wire	
	9	Rail $\frac{3}{4}$ "	8	Rail $\frac{3}{4}$ "	
	9	wire	10	wire	
	13			11	

Stanchions 4 to 6

Lifelines provided P.T.S. in each well

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	✓	35	6 x 3 1/2 x 40 OA	26 1/2	None	5-0 x 2-1	18 1/2	
Raised Quarter Deck Bulkhead	✓					6-1 x 2-0 6-1 x 3-0 6-1 x 2-0	15 17 22 1/2	
Bridge, After Bulkhead	Plated vertically	26	3 1/2 x 3 1/2 x 40 OA	26 1/2	None	4-1 x 2-7 4-1 x 3-0 4-0 x 3-0	22 1/2 24 36 1/2	
Bridge, Forward Bulkhead	✓	38	9 x 3 1/2 x 54 OA	26 1/2	But. Top & bottom	5-0 x 2-1 4-6 x 4-6 5-0 x 4-1	1-6 1-6 2-1 1/2	
Forecastle Bulkhead	Plated vertically	30	3 1/4 x 3 1/4 x 38 OA	36	None			
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	✓	32	3 x 3 x 46	30	alt. at top	B.R. 2-7 x 1-5 1/2 E.R. 5-0 x 2-0	14 19	4-0 x 7-6
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	30	3 x 3 x 46	30	none at bottom	B.R. 5-1 x 2-0	14	
Deckhouses on Flush Deck Ships	✓							

Poop Bulkhead	2 Hinged Steel Doors to W. Co. ordinary door lock stem from both sides
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	1 Hinged ^{W.C.} door to Cooks quarters. ordinary door lock. Defective. 1 Hinged Steel door to aft. stem both sides. 1 opening with riveted channels for storm boards. Storm boards not exhibited. 1 Hinged ^{W.C.} door to Bridge lower deck. operable deck only. Redwood riveting
Bridge, Forward Bulkhead ...	2 Hinged Steel doors. Seamed by both rivets. stem from fore well deck only. 1 " " " " " clips & butterfly rivets. stem from bridge lower deck only.
Forecastle Bulkhead ...	2 Hinged Steel doors. to Lamp room & locker. stem from both sides.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	1 Hinged ^{W.C.} door. to Fore. Hinges are welded from below which is in riveted channels. stem fore deck only. 1 " Steel double door. stem from fore deck only.
Exposed Machinery Casings on Super-structure Decks ...	Hinged steel door Port to Boiler Room ash hoist. stem from Bridge deck only. but riveting
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	" " " " " Eng. " stem from both sides. fastening defective.
Deckhouses on Flush Deck Ships ...	Hinged steel door port stair to Boiler Room. stem from both sides.

2 Large Ventilators to Stockholm Mechanically worked, & 2 Mushrooms with Screwed Tops.

Boiler Room downcast. 3" angle coaming with gratings & hinges Steel Storm covers.

Saddle back Coalings Haich 17-6 x 4-8. Wood Cans. Chats. Baiting & 1 Tank.

Engine Room Sk-light. Steel with kindred Hobs. 24 lbs. each.

Figure Room Skylight Steel with ringed flaps & double caps.

Large Ventilation to Engine Room. ✓

Particulars of Fresh Bunker Scuttles:— *None.*

Particulars of Flush Bunker Scuttles:— 1861.

one on Bridge Deck. Steel with wood doors 4-10 x 2-3 x 1-7" sill.

Two " Posts " Steel " " " " " " $\times 13\frac{1}{2}$ " " Done last - " " " "

Two Steel Skylights on Poop Deck. Steel Hinged Flaps with brass caps. ~~requires overhauling~~

<u>Fork Deck</u>	<u>Fore Deck</u>	<u>Bridge Deck</u>	<u>Aft Deck</u>	<u>Pop Deck</u>
1-9' dia x 36" x .25'	6-18' dia x 36" x .40'	2-18' dia x 10'-0" x 26' Protected by midship dx house.	4-18' dia x 36" x .40'	2-18' dia x 37½" x .36'
transverse	1-15' " x 36" x .40'	2 Forming Samsun Plats. well Stays		5-12' " x 31" x .24'
2-18' dia x 37½" x .35'	Grommets H = 25'	2-12' dia x 31" x .25' 2-12' dia x 30" x .20'		1 Grommet H = 19'
		2-18' " x 24½" x .35'. 1-8½" 16" x .20'		1 " H = 13"
		3-6' " x 18½" x 44" or 4 Grommets H = 2½'	No means of driving Ventilator or Grommets exhibited	

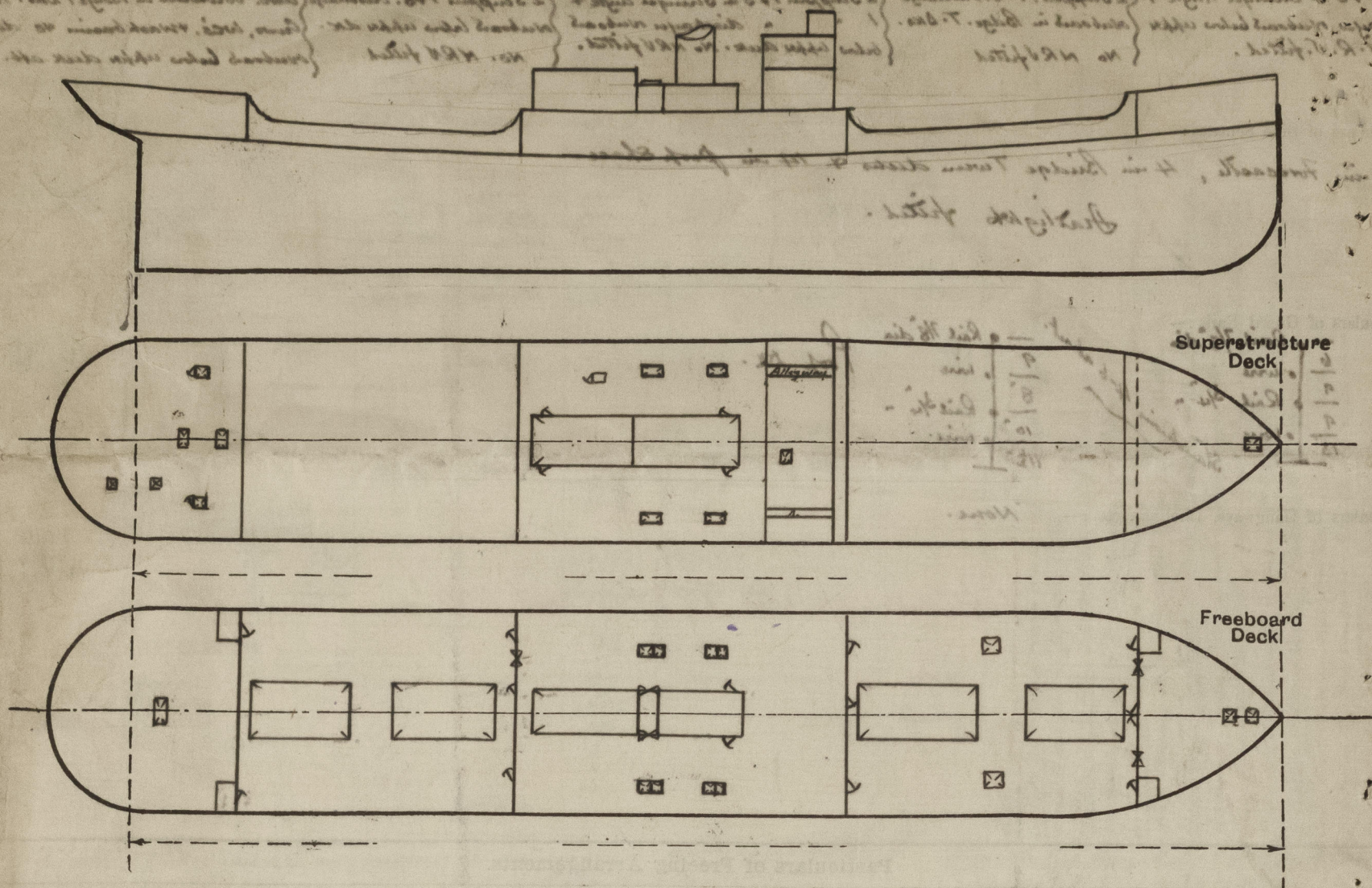
Particulars of Air Pipes in exposed positions on foreboard, midship or superstructure decks:

provided w wood popps to canvas cover

Fde Dk. { For Dk. { Bridge Dk. { attn Dk. { Pop Dk. {
 1. H = 32. { 4. H = 32. { 4. H = 21. { 4. H = 33 { 4. H = 20. {
 1. H = 21 { { 2. H = 12 1/2 { { {
 No means of classif. provided
 i.e. wood plugs

Particulars of Gangway Cargo and Coaling Ports:— *None.*

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:—

This vessel is laid up & has been examined afloat.

There is at present one tarpaulin to each hatchway in poor condition, a number of the wooden hatch covers need repairs & renewals & the ballasting down & lashing arrangements require overhauling.

The owner Superintendent states these items will be attended to in the event of the vessel going into service.

A letter from the owners giving particulars of displacement &c is forwarded herewith.

112.0	112.0	112.0	112.0
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112.0	112.0	112.0	112.0
112.0	112.0	112.0	112.0
112.0	112.0	112.0	112.0

Builder's name and yard number.

Names of sister ships.

Owners.

Fee *Frames 3300* Received by me



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