

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

MOTORSHIP Computation of Freeboard for Steamer, Sailing Ship, Tanker having <u>Shelter Deck with Linnage Opening.</u>					Port of Survey <u>London</u>	
(Type of Superstructures.)					Date of Survey <u>24-6-32</u>	
Ship's Name <u>"PONZANO"</u>	Nationality and Port of Registry <u>British Liverpool</u>	Official Number <u>149664</u>	Gross Tonnage <u>1346</u>	Date of Build <u>1928-3</u>	Name of Surveyor <u>Thomas E. Sawden</u>	
Moulded Dimensions: Length <u>270'</u> Breadth <u>39'-0"</u> Depth <u>17'-6"</u>					Particulars of Classification <u>+100 A.I.</u>	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>2955</u> tons					<u>Shelter Deck with freeboard.</u>	
Coefficient of fineness for use with Tables <u>.660</u>						

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>17.50</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>✓</u>	Moulded Breadth (B) <u>39.00</u>
Stringer plate <u>1/8" SHAD.</u> <u>3/16" U.S.D.</u> <u>.03</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>(18.00 - 17.53) 2.077</u> <u>= .98"</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{39 \times 12}{50} = 9.36$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \checkmark$	If restricted by superstructures <u>✓</u>	Ship's Round of Beam = <u>9.34</u>
Depth for Freeboard (D) = <u>17.53</u>		Difference <u>.39</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.39}{4} \times .0092 = .011$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	Standard Height of Superstructure
Poop enclosed <u>16.00</u>	<u>16.00</u>	<u>11'-0" Aft</u>		<u>16.00</u>	<u>6.20</u>
" overhang <u>4.63</u>	<u>.31</u>			<u>.31</u>	R.Q.D. <u>✓</u>
R.Q.D. enclosed					Deduction for complete superstructure <u>33.00</u>
" overhang					Percentage covered $\frac{S}{L} = 100\%$
Bridge enclosed <u>248.25</u>	<u>248.25</u>	<u>8' (Amid)</u>		<u>248.25</u>	" $\frac{S_1}{L} = 99.08\%$
" overhang aft <u>8'</u>					" $\frac{E}{L} = 99.08\%$
" overhang forward					Percentage from Table, Line A. <u>98.87</u>
Fore enclosed <u>.62</u>	<u>.47</u>	<u>14'-2 1/2" (Fore)</u>		<u>.47</u>	(corrected for absence of forecastle (if required))
" overhang					Percentage from Table, Line B.
Trunk aft					(corrected for absence of forecastle (if required))
" forward					Interpolation for bridge less than 2L (if required)
Tonnage opening aft <u>4'-6"</u>	<u>2.48</u>			<u>2.48</u>	Deduction = <u>33.00 x .9887 = - 32.63"</u>
" forward					
Total <u>270.00</u>	<u>267.51</u>			<u>267.51</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product	Mean actual shear aft = <u>Excess</u>
A.P.	<u>37.00</u>	1	<u>37.00</u>	<u>136</u>	<u>15.00</u>	1	<u>66.60</u>	Mean actual shear forward = <u>Excess</u>
1/2 L from A.P.	<u>16.46</u>	4	<u>65.84</u>	<u>19</u>	<u>19.00</u>	4	<u>118.52</u>	Mean standard shear forward
1/2 L "	<u>4.07</u>	2	<u>8.14</u>	<u>5 1/2</u>	<u>4.75</u>	2	<u>14.66</u>	
Amidships	<u>✓</u>	4	<u>✓</u>	<u>✓</u>	<u>✓</u>	4	<u>✓</u>	Length of enclosed superstructure forward of amidships =
1/2 L from F.P.	<u>8.14</u>	2	<u>16.28</u>	<u>4 1/4</u>	<u>9.87</u>	2	<u>23.24</u>	" " aft of " =
1/2 L "	<u>32.93</u>	4	<u>131.72</u>	<u>34 3/4</u>	<u>37.5</u>	4	<u>187.96</u>	
F.P.	<u>74.00</u>	1	<u>74.00</u>	<u>74 1/2</u>	<u>84.00</u>	1	<u>105.60</u>	
Total			<u>332.98</u>				<u>576.58</u>	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{183.6}{18} (.75 - .50) = -2.55$$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient <u>✓</u>
Depth to Freeboard Deck = <u>17.53</u> Ft.	$\Delta = \frac{3560}{40} = 89$	Depth Correction <u>.98</u>
Summer freeboard = <u>.17</u>	Tons per inch immersion at summer load water line	Deduction for superstructures <u>32.63</u>
Moulded draught (d) = <u>17.36</u>	$T = 19.8$	Sheer correction <u>2.53</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{17.36}{4} = 4.34 = 4.4$	Deduction = $\frac{\Delta}{40 T}$ inches = $\frac{89}{40 \times 19.8} = 1.12 = 1.1$	Round of Beam correction <u>-</u>
Addition for Winter North Atlantic Freeboard (if required) = <u>2"</u>		Correction for Thickness of Deck amidships <u>-</u>
		Other corrections, scantlings, etc. <u>-</u>
		Summer Freeboard = <u>36.58</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>4 1/2"</u>	Tropical Fresh Water Freeboard <u>0' - 2" (LIMITED)</u>
Fresh Water Line " " <u>4 1/2"</u>	Fresh Water " " <u>0' - 2 1/2"</u>
Tropical Line " " <u>4 1/2"</u>	Tropical " " <u>0' - 2 1/2"</u>
Winter Line below " " <u>4 1/2"</u>	Winter " " <u>0' - 2" (LIMITED)</u>
Winter North Atlantic Line " " <u>6 1/2"</u>	Winter North Atlantic " " <u>0' - 8 1/4"</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	No. 1. S.H.D.	No. 2. S.H.D.	No. 3. S.H.D.	No. 1. U.D.	No. 2. U.D.	No. 3. U.D.	Tonnage			
Dimensions of Hatchway	17' 3" x 14'	30' 8" x 14'	30' 8" x 14'	17' 3" x 14'	30' 8" x 14'	30' 8" x 14'	4' 6" x 14'			
COAMINGS	Height above Deck	32	32	32	9" B.A.	9" B.A.	9" B.A.	9" B.A.		
	Thickness	44	44	44	44	44	44	44		
	Stiffeners	44	44	44	44	44	44	44		
	Brackets, Stays	7 B.A.	7 B.A.	7 B.A.	-	-	-	-		
HATCH BEAMS	Number	3	5	5	3	5	5			
	Spacing	4'-4"	5'-1"	5'-1"	4'-4"	5'-1"	5'-1"			
	Scantling and Sketch	3x3x42	As N°1	As N°1	3x3x42	As N°1	As N°1			
	Bearing Surface	3	3	3	3	3	3			
FORE AND AFTERS	Number									
	Spacing									
	Unsupported Lengths									
	Scantling* and Sketch									
HATCH COVERS	Material	Prime								
	Thickness	2 1/2								
	How fitted	For A								
	Bearing Surface	3"								
Spacing of Cleats	24							Prime 2 1/2 For A 3"		
Number of Tarpaulins	2							-		

*Are wood fore and afters steel shod at all bearing surfaces? *Yes*
 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 on Shelter D.*

Particulars of fiddle, funnel and ventilator coamings:—

E. Room Skylight of Steel strongly constructed.
 Funnel vent Coamings in efficient condition.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

1 in Steel Deck House aft. to Steering Comp. with hinged wood door 4'-9" x 25" x 20" sill operated from both sides. ✓

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

Fore Deck:— 1 at 9" x 38" high to F. PEAK.
 1 at 24" x 36" " " Holds.
 Aft Deck:— 2 at 8" x 4" x 19" high to A.P. Store.
 1 at 12" x 36" " " Steering Comp.
 2 at 6" x 36" " " Fun. D.
 4 at 24" x 36" " " Holds.
 Ventilators fitted with wood plugs & canvas covers. ✓

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

Deck:— 1 at 3" x 30" high to A.P.
 3 at 3" x 30" " " DB.
 4 at 2" x 30" " " F.W.
 2 at 4" x 30" " " OF DB.
 Deck:— 5 at 3" x 30" high to DB.
 2 at 4" x 30" " " OF DB.
 2 at 2 1/2" x 30" " " DB.
 1 at 2 1/2" x 30" " " F.W.
 Air pipes fitted with Canvas Covers. ✓

Particulars of Gangway Cargo and Coaling Ports:—

None.



Particulars of Scuppers and Sanitary Discharge Pipes:—

~~6 Scuppers P.S. in Shelter Green deck fitted with storm valves.~~
Discharges all led overboard above freeboard deck & fitted with storm valves.

Particulars of Side Scuttles:—

Fitted with fixed hinged deadlights.

Particulars of Guard Rails:—

Forward & aft. 3'-3" high; 2 rods; stanchions 6'-0" apart.

Particulars of Gangways, Lifelines, etc.:—

None fitted.

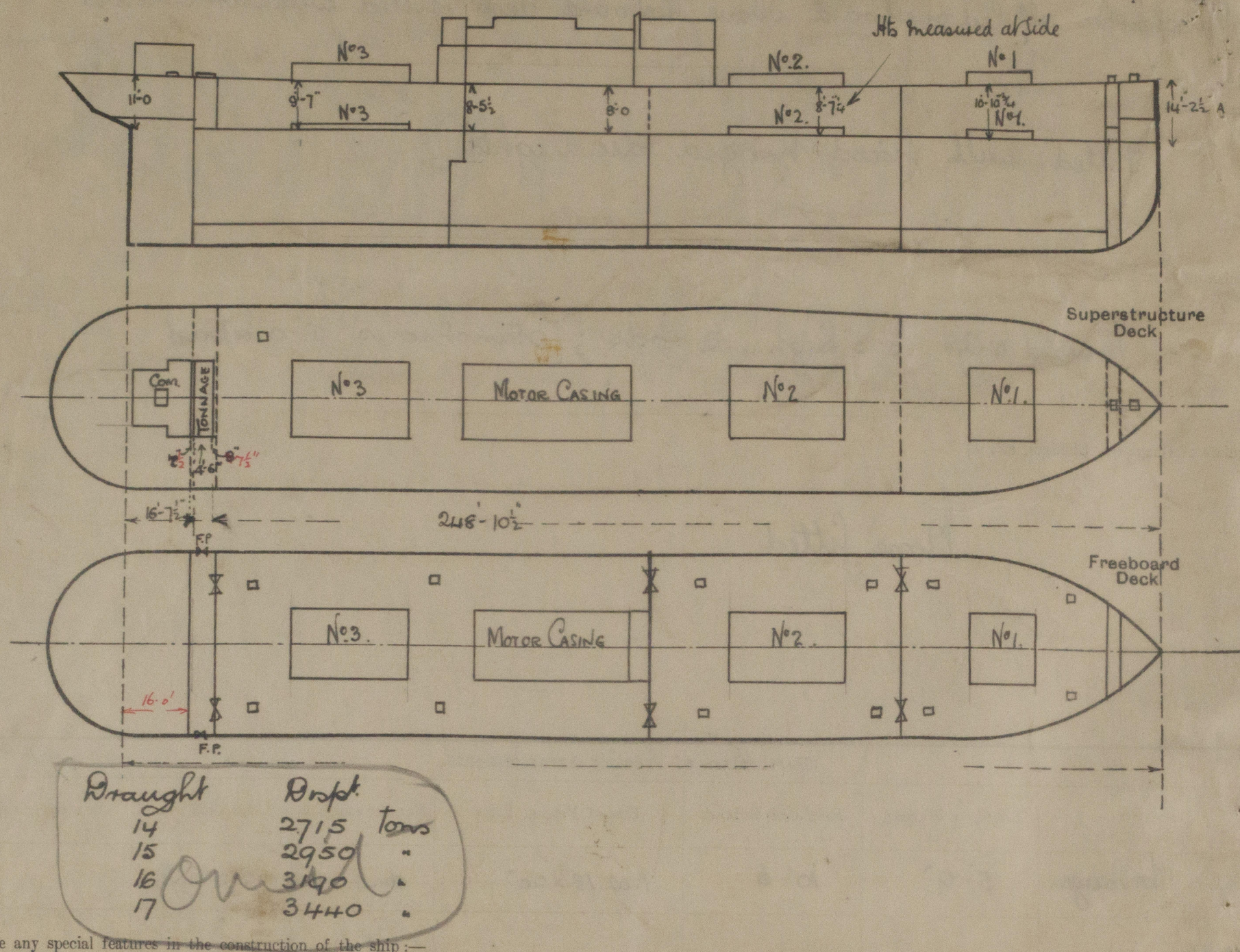
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well Longmage.	5'-9"	10'-6"	None 1 @ 18" x 20" 5" dia. screw down non return valve P.S. geared to shelter deck.	one.	2.55 sq. ft.	
Forward Well ...						
State position of each freeing port (F. and A. position and height above deck edge) } After Well:— middle State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— } Forward Well:— Additional area where sheer is less than standard. Hinged plate shutters.						

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 ...	16" x 32	.26	3 x 2 1/2 x 30	30	None.	—	—	10'-6"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	Vert.	.26	4 1/2 x 3 x 28 B.A.	30"	None.	2 @ 6' x 4'-0"	19"	10'-6"
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...	"	.26	4 1/2 x 3 x 28 B.A.	24"	Attach T.Y.B.	—	—	14'-0"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks ...	18" x 30	.26	3 x 2 1/2 x 30	30 & 27	—	1 @ 5' x 2'-6"	19"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	18" x 32	30	" "	30"	—	—	—	8'-0"
Deckhouses on Flush Deck Ships ...								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead ...	—
Raised Quarter Deck Bulkhead ...	—
Bridge, After Bulkhead ...	3" Shifting Boards full height in riveted channels. ✓
Bridge, Forward Bulkhead ...	—
Forecastle Bulkhead ...	—
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks ...	1 Hinged Steel door Operated from both sides ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Deckhouses on Flush Deck Ships ...	

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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:—

Small Hatches:—

- 1 to F.P. 23" x 25" x 13" high with hinged steel cover & clips
- 12 Escapes on U.D. aft. 30" x 20" x 9" high with hinged steel w.t. covers
- 1 to Ch. L. 25" x 16" x 9" high with hinged steel cover.

This survey has been carried out afloat. The S.S. No. 1 will be completed in about 2 months & the requirements of this assignment carried out at the same time.

Builder's name and yard number. Harland & Wolff Ltd (Glasgow) No. 745

Names of sister ships "Pachico" & "Pinto"

Owners Mac Andrews & Co Ltd.

Fee £ 8 : 10 : 0 Received by me

2/17/32



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