

5 MAY 1932

Index No. **28075**
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No. **100318**

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Having

*file and R.Q.D.*Port of Survey *Liverpool**CARY FREIGHTER*

Type of Superstructures.)

Ship's Name

"ARDENZA"
ATLANTE

Nationality and Port of Registry

BRITISH SPANISH
Leith

Official Number

142025

Gross Tonnage

933

Date of Build

*1920-12*Date of Survey *8/4/32 and*
*subsequently.*Name of Surveyor *A.W. Jackson.*Particulars of Classification *10091*

Moulded Dimensions: Length *210.0'* Breadth *31.5'* Depth *14.48'*
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *1620* tons
 Coefficient of fineness for use with Tables *.696*

Depth for Freeboard (D)

Moulded depth ... *14.48*
 Stringer plate *14.48* ... *.05*
 Sheathing on exposed deck *Nil*
 $T \left(\frac{L-S}{L} \right) =$...

Depth for Freeboard (D) = *14.53*

Depth correction

(a) Where D is greater than Table depth
 $(D - \text{Table depth}) R = (14.53 - 14.00) 1.615$
 $= .53 \times 1.615 = +.86$
 (b) Where D is less than Table depth (if allowed)
 $(\text{Table depth} - D) R =$...

If restricted by superstructures —

Round of Beam correction

Moulded Breadth (B) *31.5"*
 Standard Round of Beam = $\frac{B \times 12}{50} = 7.56$
 Ship's Round of Beam = *8"*
 Difference *0.44*
 Restricted to
 Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.44}{4} \left(1 - \frac{.3259}{14.6746} \right) = .04$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	<i>114.91</i>	<i>114.91</i>	<i>3.75</i>		<i>114.91</i>
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Trunk enclosed ...	<i>26.75</i>	<i>26.75</i>	<i>7.0</i>		<i>26.75</i>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<i>141.66</i>	<i>141.66</i>			<i>141.66</i>

Standard Height of Superstructure *6.0*
 " " R.Q.D. *3.73*
 Deduction for complete superstructure *27.0*
 Percentage covered $\frac{S}{L} = \frac{141.66}{210.0} = 67.46$
 " " $\frac{S_1}{L} =$ " = *67.46*
 " " $\frac{E}{L} =$ " = *67.46*
 Percentage from Table, Line A. *58.68*
 (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 = $27.00 \times .5868 = 15.84$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>31.00</i>	<i>1</i>		<i>31.00</i>	<i>42.00</i>	<i>42.00</i>	<i>1</i>		<i>42.00</i>
$\frac{1}{4}L$ from A.P. ...	<i>13.80</i>	<i>4</i>		<i>55.20</i>	<i>17.25</i>	<i>17.25</i>	<i>4</i>		<i>69.00</i>
$\frac{2}{4}L$ " ...	<i>3.40</i>	<i>2</i>		<i>6.80</i>	<i>5.75</i>	<i>5.75</i>	<i>2</i>		<i>11.50</i>
Amidships ...		<i>4</i>					<i>4</i>		
$\frac{3}{4}L$ from F.P. ...	<i>6.82</i>	<i>2</i>		<i>13.64</i>	<i>10.63</i>	<i>10.63</i>	<i>2</i>		<i>21.26</i>
$\frac{1}{4}L$ " ...	<i>27.59</i>	<i>4</i>		<i>110.36</i>	<i>28.50</i>	<i>28.50</i>	<i>4</i>		<i>114.00</i>
F.P. ...	<i>62.00</i>	<i>1</i>		<i>62.00</i>	<i>60.00</i>	<i>60.00</i>	<i>1</i>		<i>60.00</i>
Total ...				<i>279.00</i>					<i>277.42</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{1.58}{18} \left(\frac{75-3373}{2} \right) = +.04$

If limited on account of midship superstructure. —

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. —

Actual ht *7 R.Q.D.* *3.75*
 Standard " " *3.73*
 $\frac{.02}{.02} = .24$

Mean actual sheer aft = *Excess*
 Mean standard sheer aft =

Mean actual sheer forward = *Deficient*
 Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = *.05*

" " aft of " = *.50*

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

RAISED QUARTER
 Depth to Freeboard Deck = *18.28*
 Summer freeboard = *4.58*
 Moulded draught (d) = *13.70*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *3.43* = *3\frac{1}{2}*

Addition for Winter North Atlantic Freeboard (if required) = *2"*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1836$

Tons per inch immersion at summer load water line

$T = 12.80$

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

= *3.60*

3.6 = 3\frac{1}{2}

TABULAR FREEBOARD corrected for Flash Deck (if required)

Correction for coefficient $\frac{.696 + .68}{1.36} = \frac{1.376}{1.36}$

Depth Correction ... *.86* ...

Deduction for superstructures ... *15.84* ...

Sheer correction ... *.04* ...

Round of Beam correction ... *.04* ...

Correction for Thickness of Deck amidships ... *.04* ...

Other corrections, *RAISED QUARTER DECK* ... *45.00* ...

45.90 *15.88* *+ 30.02*

Summer Freeboard = *55.11*

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *RAISED QUARTER* *Wood, Steel, Deck* — *4'-7"*

Tropical Fresh Water Line above Centre of Disc ... *4'*

Fresh Water Line " " ... *3\frac{1}{2}*

Tropical Line " " ... *3\frac{1}{2}*

Winter Line below " " ... *3\frac{1}{2}*

Winter North Atlantic Line " " ... *5\frac{1}{2}*

Tropical Fresh Water Freeboard ... *4'-0"*

Fresh Water " " ... *4'-3"*

Tropical " " ... *4'-5"*

Winter " " ... *4'-10"*

Winter North Atlantic " " ... *5'-0"*

10 MAY 1932

12 MAR 1937

RECEIVED

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

		HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS			
		Main DK.		R.P.D.K.	
Description of Hatchway		No. 1	No. 2	No. 3	
Dimensions of Hatchway		22'6" x 14'6"	25'3" x 20'	24'4 1/2" x 17'9"	
COAMINGS	Height above Deck	48"	48"	48"	
	Thickness	44"	44"	44"	
	Sides	44"	44"	44"	
	Ends	44"	44"	44"	
	Stiffeners	8 x 6 x 40 D.P.	8 x 3 x 40 D.P.	8 x 3 x 40 D.P.	
	Brackets, Stays	2	2	2	
HATCH BEAMS	Number	4	4	4	
	Spacing				
	Scantling and Sketch	Plate Angles A 14 x 36, 4 x 3 x 44 B 18 x 34, 4 x 3 x 42 C 17 x 32, 4 x 3 x 44 D 16 x 32, 4 x 3 x 44	Plate 20 x 36 Angles A 18 x 36, 4 x 3 x 44 B 18 x 36 C 17 x 36 D 16 x 36	Plate Angles A 18 x 36, 4 x 3 x 44 B 18 x 36 C 17 x 36 D 16 x 36	
	Bearing Surface	3"	3"	3"	
FORE AND AFTERS	Number				
	Spacing				
	Unsupported Lengths				
	Scantling* and Sketch				
	Bearing Surface				
HATCH COVERS	Material	W.P.	W.P.	W.P.	
	Thickness	2 1/2"	2 1/2"	2 1/2"	
	How fitted	F. & A.	F. & A.	F. & A.	
	Bearing Surface	3"	3"	3"	
Spacing of Cleats		24"	24"	24"	
Number of Tarpaulins		3	3	3	

*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:—

Stokehold grating covered by strong steel hinged cover. ✓

Fidley ventilators in efficient condition. ✓

Funnel coaming in an efficient condition. ✓

Engine skylight of steel, strongly constructed. ✓

Particulars of Flush Bunker Scuttles:—

Cast steel 2P and 2S on R.P.D.K. ✓

fitted with bayonet joints ✓

Particulars of Companionways:—

None fitted. ✓

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

No.	Position	Diam.	Ht.	Thks.	Service.
1	Fore Well	11"	37"	48"	Fore Hold.
2	Platform Deck No. 1 & 2 Hatch	11"	36"	48"	" "
3	Fore Well	11"	37"	48"	" "
2	R.P.D.K. aft.	11"	36"	48"	After Hold
1	"	9"	36"	36"	Tunnel
1	"	6"	36"	22"	After Peak Space

All ventilators closed with wood plugs and canvas covers. ✓

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

No.	Position	Diam.	Ht.	Service.
1	Fore Head	3 1/2"	3 1/2"	Fore Peak Tank.
1	"	2"	9"	No. 1 D.B. Tank.
4	Fore Well	2"	29"	No. 1 & 2 D.B. Tanks
6	R.P.D.K.	2"	30"	No. 2 & 3 D.B. Tanks
1	"	3"	7"	After Peak Tank.

✓ Height above wood deck.

Plugs & Covers provided for all air pipes

Particulars of Gangway Cargo and Coaling Ports:—

None fitted. ✓



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Particulars of Scuppers and Sanitary Discharge Pipes

Ans.
Led straight overboard through deck stringer angles,
size 4"x4".
Sanitary discharge pipes provided with storm valves
at ship's sides.

Particulars of Side Scuttles:

Side scuttles to crew spaces in fo'c'se fitted with hinged deadlights.
All scuttles of substantial construction.

Particulars of Guard Rails:

Guard rails on fo'c'se 3'-6" high, with three rods and stanchions spaced
5'-0" apart.

Particulars of Gangways, Lifelines, etc.:

Lifelines fitted P+S, stanchions shipped through holes
in hatch stiffeners.

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Raised Quarter Deck After Well ...	114.91'	3'-6"	3'-3" x 1'-6"	3	14.63 14.57 sq	23 sq
Forward Well ...	68.33'	3'-9"	3'-4" x 1'-6"	3	15 sq	18.66 sq

State position of each freeing port ...

(F. and A. position and height above deck edge)

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.

After Well: —
Forward Well: —
Freeing ports fitted with shutters turning
about horizontal bar, additional bar below.
Height above deck edge 10 1/2".

Particulars of Superstructures, Trunks, Casings, Deckhouses.

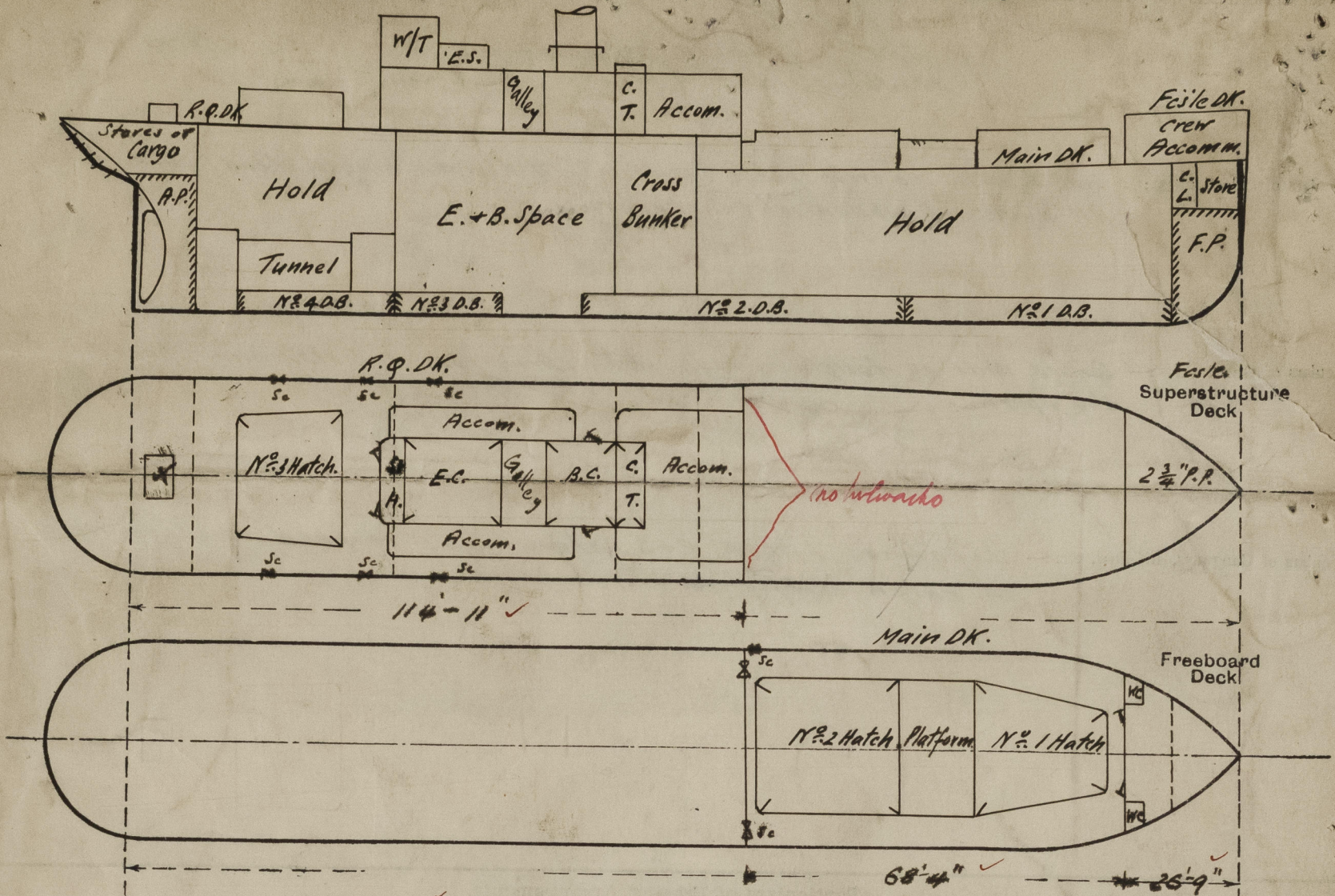
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	None fitted							
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	None fitted							
Bridge, Forward Bulkhead ...	None fitted							
Forecastle Bulkhead ...	30"	25"	3" x 2 1/2" x 28"	28"	Nil	2@ 4'-9" x 2'-0"	18"	7'-0" steel to steel.
Trunk, Aft ...	None fitted							
Trunk, Forward ...	None fitted							
Exposed Machinery Casings on Raised Quarter Deck ...	38"	32"	3" x 8" x 36"	36"	Nil	2@ 2'-0" x 4'-9"	18"	7'-0"
Exposed Machinery Casings on Superstructure Decks ...	None fitted.		3" x 8" x 38"	Cabin divisions and doorways.	Nil	2@ 2'-0" x 4'-9"	18"	7'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	None fitted.							
Deckhouses on Flush Deck Ships ...	None fitted.							

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

Poop Bulkhead ...	None fitted
Raised Quarter Deck Bulkhead ...	Bolted plates 3'-6" x 2'-6", 1 panel, access to F.W. Tanks.
Bridge, After Bulkhead ...	None fitted.
Bridge, Forward Bulkhead ...	None fitted.
Forecastle Bulkhead ...	Steel doors, capable of being manipulated from both sides.
Exposed Machinery Casings on Raised Quarter Deck ...	Steel doors, capable of being manipulated from both sides.
Exposed Machinery Casings on Superstructure Decks ...	None fitted.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	None fitted.
Deckhouses on Flush Deck Ships ...	None fitted.

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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:—



From 1st ENTRY $24 \Delta^{\circ} @ 75\% 14.60' = 14.05' (\text{at } 10'-11")$ Keel 12 T.P. 12.50
 $85\% \text{ MLD} = 12'-3\frac{3}{4}" = 12'-5\frac{1}{2}" \text{ BK. } -10'-11\frac{1}{2}" = 17\frac{3}{4} \times 12.55 = 223$
 $14.05 + 223 = 1628 \text{ ent} = 1620 \text{ mld.}$

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

Draught Extreme	Deadweight Salt Water
13'-8"	1024 Tons.
13'-0"	915 "
12'-0"	745 "
11'-0"	605 "

Tons per inch
 at load displacement } = 13.04 Tons.
 (i.e. 13'-8" draught)

Vessel examined afloat for freeboard survey only.

Builder's name and yard number Messrs Hawthorn & Co. Ltd. Nº 180

Names of sister ships "Arbonne" same builders Nº 182.

Owners J. & P. Hutchinson. Ltd.

Fee £ 6 : 16 : 0

Received by me



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