

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Poop Bridge, Forecastle.

Port of Survey BARCELONA

(Type of Superstructures.)

Date of Survey 9-1-33.

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"RAMON ALONSO R"	SPANISH BARCELONA		4017	1898-4

Name of Surveyor Gen. J. Thoma

Moulded Dimensions: Length 370'-0" Breadth 45'-9" Depth 28'-6" 8.687"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 9322 m³ tons
Coefficient of fineness for use with Tables .803 assumed.

Particulars of Classification F100 A 1
S.S. Bcl. 2nd No. 3-5, 23
S.S. Bcl. No. 2-32.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	28'-6"	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	45'-9" 13.94m.
Stringer plate	8.687	8.33(8.723-7.519) 28.48 = + 286		Standard Round of Beam = $\frac{B \times 12}{50}$	10.98 279
Sheathing on exp. sed deck	FORD-NIL	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	11.5 292
T $\left(\frac{L-S}{L}\right)$	114 BRIDGE-NIL			Difference	1.5 13
	076 x 30.49			Restricted to	
	112.73	If restricted by superstructures		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{13}{4} \times .5436 = -2$
Depth for Freeboard (D) =	8.723				

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	36	10.97	2.134		10.97
" overhang	16.97		2.134		
R.Q.D. enclosed					
" overhang	27.90		2.134		
Bridge enclosed	100	27.90	2.134		27.90
" overhang aft	1.36	1.02	2.134		1.02
" overhang forward			2.134		
F'cle enclosed	38	11.58	2.134		11.58
" overhang	11.58		2.134		
Trunk aft					
" forward					
Tonnage opening aft					
" forward	51.81				
Total	174	51.47			51.47

Standard Height of Superstructure 2.198

" " R.Q.D.

Deduction for complete superstructure 1016

Percentage covered $\frac{S}{L} = 45.94\%$

" $\frac{S_1}{L} = 45.64\%$

" $\frac{E}{L} = 45.64\%$

Percentage from Table, Line A.
(corrected for absence of fore-castle (if required))

Percentage from Table, Line B. 32.29%
(corrected for absence of fore-castle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = 1016 x .3229 = - 328

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P.	11.94	1	11.94	42.	1067	1	1067
1/4 L from A.P.	530	4	2120	18.17	461	4	1844
1/2 L	20.41	2	40.82	4.53	115	2	230
3/4 L	133	4	532				
Amidships	5.17						
1/4 L from F.P.	0	2	0	11.42	290	2	580
1/2 L	265	4	1060	45.82	1164	4	4656
3/4 L	10.34	2	20.68	105.	2667	1	2667
F.P.	1061	1	1061				
Total	41.83		2387				4348

Mean actual sheer aft = Deficient (> .75)
Mean standard sheer aft

Mean actual sheer forward = Excess.
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = .127

" " aft of " = .130

Correction = $\frac{\text{Difference between sum of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{303}{18} (.75 - .2297) = -9$

If limited on account of midship superstructure.

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 = 8.702
Summer freeboard = 1.654
Moulded draught (d) = 7.048

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = 147

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
= 147

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... 286
Deduction for superstructures ... 328
Sheer correction ... 9
Round of Beam correction ... 2
Correction for Thickness of Deck amidships ... 21
Other corrections, scantlings, etc. ...

Summer Freeboard = 1654

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

Tropical Fresh Water Line above Centre of Disc ... 11.5.6" 294
Fresh Water Line " " ... 5.78" 147
Tropical Line " " ... 5.78" 147
Winter Line below " " ... 5.78" 147
Winter North Atlantic Line " " ...

6 FEB 1933

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
FREEBOARD DK.					SUPERSTRUCTURE DK.				
Description of Hatchway	No. 1.	No. 2.	No. 3.	No. 4.	TRIMMING HATCH- POOP NO. 1 HATCH	TRIMMING HATCH- AFT NO. 2 HATCH	POOP BUNKER HATCH	AFT BUNKER HATCH	POOP HATCH
Dimensions of Hatchway	24'-0" x 16'-0"	28'-0" x 16'-0"	25'-0" x 16'-0"	24'-0" x 16'-0"	32' x 49"	36' x 57"	8'-0" x 15'-0"	5'-11" x 13'-0"	7'-10" x 5'-11"
COAMINGS	Height above Deck ... 38 1/2"	38 1/2"	35 1/2"	35 1/2"	24"	39"	9" above 33" casing, 1/4" (9 1/2" above wood dk)	1/4" above 33" casing, 1/4" (9 1/2" above wood dk)	16"
	Thickness ... 3/8"				1/4"	1/4"	1/4"	1/4"	1/4"
	Sides ... 7" x 2 3/4" x 3/8"	Sing. individually					1/2" rounds at 60°		
	Stiffeners ...								
	Brackets, Stays ...								
HATCH BEAMS	Number ... 2								
	Spacing ... Evenly spaced								
	Scantling and Sketch ...	4" x 3" x 1/2"			None				
		Peak 48" x 3/8"							
		1/2" rounds at 60°							
	Bearing Surface ...	3"							
FORE AND AFTERS	Number ... 3								
	Spacing ... Even								
	Unsupported Lengths ... 7'-6"								
	Scantling and Sketch ...	7 1/2" x 5"			None				
		CENTRE LINE INTERMEDIATE							
	Bearing Surface ...	3"							
HATCH COVERS	Material ... White Pine				White Pine		White Pine		White Pine
	Thickness ... 2 1/2" x 3"				2 1/2"		2 1/2"		2 1/2"
	How fitted ... P.S.				P.S.		P.S.		P.S.
	Bearing Surface ... 2 1/8" x 1 1/2"				3"		2 1/2"		2 1/2"
Spacing of Cleats ...	24"				4 1/2"		4 1/2"		24"
Number of Tarpaulins ...	3				3		3		3

*Are wood fore and afters steel shod at all bearing surfaces? *about half of fore - afters are steel shod.*
 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. Coamings fitted with nags.*

Particulars of fiddle, funnel and ventilator coamings:—

with permanently attached steel
 Fiddle Top - Coating + covers provided
 Fiddle Top 43" above wood bridge dk.

Particulars of Flush Bunker Scuttles:—

3 each side in bridge dk.
 Cast iron - of stout construction - not in use.

Particulars of Companionways:—

None.

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

2 ventilators (IPRIS) between No. 1 & 2 Hatches - Coaming 39" above steel dk. - strong construction + staying not considered necessary.
 2 ventilators (IPRIS) between No. 3 & 4 Hatches - Coaming 36" (above 3" wood dk).
 all ventilator coamings are provided with wood planks canvas cover.

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

None.

Particulars of Gangway Cargo and Coaling Ports:—

only in bulwark P.

Particulars of Scuppers and Sanitary Discharge Pipes — No discharges from spaces below freeboard dk.
 Sanitary discharge from officer's quarters SS under bridge - discharge 40" below floor dk - fitted with return valve.
 Sanitary discharge from Engineer's quarters PS amidships - discharge 7'3" below floor dk - fitted with return valve.
 Sanitary discharge from crew's quarters fwd - discharge 21" below floor dk - no valve fitted.

Particulars of Side Scuttles:—

fwd in crew's quarters (5 P, 5 S) sil 24" under forecastle dk - no deadlights fitted.
aft (7 P, 7 S) " 24" " poop dk - " " " "

Particulars of Guard Rails:—

Bulwark plating on freeboard dk. 5 1/8".
 6" bulb plate stiffeners spaced about 6'-0".
 Guard rails on Superstructure Decks:—
 stanchions 1 1/2" dia spaced abt 48" ht. 38"
 3 rails 1/2" dia spaced 12"

Particulars of Gangways, Lifelines, etc.:—

No provision made at present.
Crew berthed both fwd & aft.
Stowable provisions made for rigging lifelines both forward and aft.

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	PS 96'-7" SS 104'-0"	45"	PS { 1 @ 28 1/2" x 35" <i>100</i> 3 @ 19" x 22" <i>93</i> SS { 1 @ 28 1/2" x 35" <i>100</i> 3 @ 19" x 22" <i>93</i>	735	PS 17.4 sq ft SS 12.4 sq ft	19.3 sq ft 20.8 sq ft
Forward Well	100'-0"	48"	PS 1 @ 36" x 27" <i>675</i> 3 @ 21 1/2" x 19" <i>1005</i>	1684	16.85 sq ft	20 sq ft

State position of each freeing port ... After Well:— *alt 9'-0" from poop bulkhead*
 (F. and A. position and height above deck edge) } Forward Well:— *alt 8'-0" from bridge bulkhead*
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— *alt 6'-3" from fwd bridge bulkhead*
9" above dk edge
12" above dk edge
2 bars.

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

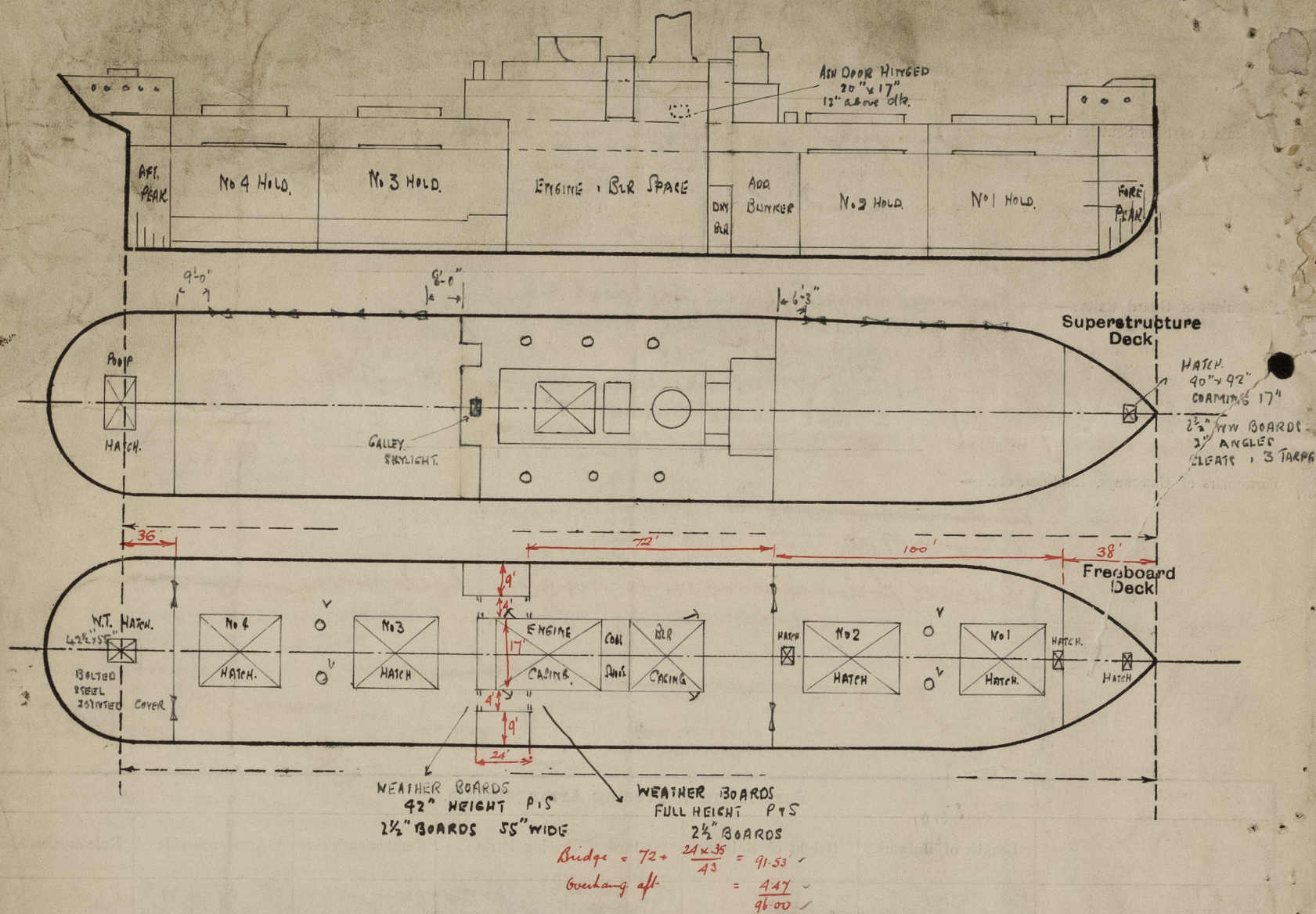
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	19" x 3/16"	1/4" F	< 6 x 3 1/2 x 1/16	32 1/2"	Anchor to bulkhead	56" x 26 1/2" (8)	15"	7'-0"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	21" x 1/16"	5/16"	< 3 x 2 1/2 x 1/16	36"		53" brd 1 1/4"	16"	7'-0"
Bridge, Forward Bulkhead	23" x 1/16"	5/16"	BA 6 x 3 x 3/8	32"		55 1/2" x 38"	16"	7'-0"
Forecastle Bulkhead	18" x 1/4"	1/4"	< 3 x 2 1/2 x 1/32	24 alt		57" x 24"	18"	7'-0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks		5/16"	vanish	38"				33"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	18" x 3/8"	1/4"	Plate flanged 3"	35"	None	52" x 23 1/2" 55" x 23	18 1/2"	7'-0"
Deckhouses on Flush Deck Ships								

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

Poop Bulkhead	5/16" steel doors hinged, fastening from outside with strong backs (also 1 1/2" wood doors inside)
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	Weather Boards as per sketch.
Bridge, Forward Bulkhead	Strong steel doors 3/8" thick fastening with strong backs from inside bridge space.
Forecastle Bulkhead	1 1/2" teak wood doors operated from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Strong steel doors 1/4" thick operated from both sides.
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 shown on the following sketches:—



State any special features in the construction of the ship:— Present Survey held with vessel afloat

Vessel examined in dry-dock & shee checked on 23/7/32 at Barcelona.

Worship City

Builder's name and yard number

A. Mc. Millan & Son Ltd. Dumbarton

Names of sister ships

Owners

Hijo de Ramon A Ramos Barcelona.

Fee £

780/ plus.

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