

SURVEYS FOR FREEBOARD.

24 JAN 1933 FEB 11 1933

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Complete Superstructure with tonnage opening aft

Port of Survey Newcastle.

Date of Survey 22nd Jan 1933

Name of Surveyor W. J. Craig

Particulars of Classification +100A1
shells dh
with fld.

(Type of Superstructures.)
Ship's Name Now EMBIRICOS NICOLAOS
Nationality and Port of Registry Greek Piraeus
Official Number 3798
Gross Tonnage 1918.4
Date of Build 1918.4

Moulded Dimensions: Length 364.21 Breadth 51.16 Depth 32.0 - 7.6 = 24.4

Moulded displacement at moulded draught = 85 per cent. of moulded depth 8830 tons

Coefficient of fineness for use with Tables .797

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth 24.50	(a) Where D is greater than Table depth (D - Table depth) R = (24.50 - 24.28) 2.801	Moulded Breadth (B) 51.16
Stringer plate04	= + .73	Standard Round of Beam = $\frac{B \times 12}{50} = 12.28$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Ship's Round of Beam = 12.50
Depth for Freeboard (D) = 24.54	If restricted by superstructures	Difference .22 excess
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times (1 - \frac{S_1}{L}) = \frac{.22^2}{4} \times .0072 = \text{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	29.25	29.25	7.5		29.25	Standard Height of Superstructure 7.142
" overhang	2.08	1.04			1.04	" " R.Q.D. ✓
R.Q.D. enclosed						Deduction for complete superstructure 39.61
" overhang						Percentage covered $\frac{S}{L} = 100\%$
Bridge enclosed	328.71	328.71	7.5		328.71	" " $\frac{S_1}{L} = 99.28\%$
" overhang aft						" " $\frac{E}{L} = 99.28\%$
" overhang forward						Percentage from Table, Line A. 99.11%
Fore enclosed						(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	4.17	2.60			2.60	Deduction = 39.61 x .9911 = - 39.26
" " forward						
Total	364.21	361.60			361.60	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
A.P.	46.42	1	46.42	45.00	49.30	1	49.30	Mean actual sheer aft = Excess
1/2 L from A.P.	20.65	4	82.60	20.54	21.94	4	87.76	Mean actual sheer forward = Excess
1/2 L "	5.11	2	10.22	5.12	5.42	2	10.84	Mean standard sheer forward
Amidships		4				4		Length of enclosed superstructure forward of amidships =
1/2 L from F.P.	10.21	2	20.42	10.04	10.37	2	20.74	" " aft of " =
1/2 L "	41.31	4	165.24	40.28	41.96	4	167.84	
F.P.	92.84	1	92.84	90.00	94.30	1	94.30	
Total			417.74	414.30			430.78	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{13.04}{18} (.75 - .50) = -.18$

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 = 24.54
Summer freeboard = 2.27
Moulded draught (d) = 22.27

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 5.56 = 5 1/2

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 9525$

Tons per inch immersion at summer load water line

T = 37.65

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

= 6.32

= 6 1/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction73	
Deduction for superstructures		39.26
Sheer correction18
Round of Beam correction		
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	.73	39.44
Summer Freeboard =		27.17

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

Tropical Fresh Water Line above Centre of Disc	11 3/4" = 29 1/2	Tropical Fresh Water Freeboard	1' - 3 1/2" = 39 3/4
Fresh Water Line " "	6 1/4" = 15 1/2	Fresh Water " "	1' - 9" = 53 1/2
Tropical Line " "	5 1/2" = 14 1/2	Tropical " "	1' - 9 3/4" = 55 1/2
Winter Line below " "	5 1/2" = 14 1/2	Winter " "	2' - 8 3/4" = 83 1/2
Winter North Atlantic Line " "		Winter North Atlantic " "	

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECK <i>in 2nd deck</i>									
Description of Hatchway	No. 1	No. 2	No. 2A	No. 3	No. 4	Bunker Hatch	18" Hatch		
Dimensions of Hatchway	25'0" x 18'0"	29'2" x 18'0"	12'6" x 18'0"	29'2" x 18'0"	25'0" x 18'0"	7'4" x 3'0"	2'6" x 2'0"		
COAMINGS									
Height above Deck	3 1/2"	9" BA	9" BA	9" BA	9" BA	9" BA	9" BA		
Thickness	3 1/2"								
Sides									
Stiffeners									
Brackets, Stays									
HATCH BEAMS									
Number	4	5	2	5	4				
Spacing	5'-0"	4'-10"	4'-2"	4'-10"	5'-0"				
Scantling and Sketch	7" Plank 15 1/2" x 38"	7" Plank 15 1/2" x 38"	7" Plank 15 1/2" x 38"	7" Plank 15 1/2" x 38"	7" Plank 15 1/2" x 38"				
Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"				
FORE AND AFTERS									
Number									
Spacing									
Unsupported Lengths									
Scantling and Sketch									
Bearing Surface									
HATCH COVERS									
Material	Wood	Wood	Wood	Wood	Wood	Wood	Wood		
Thickness	2 1/4"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"		
How fitted	F+A	F+A	F+A	F+A	F+A	F+A	F+A		
Bearing Surface	3"	3"	3"	3"	3"	3"	3"		
Spacing of Cleats									
Number of Tarpaulins									
*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes</i> Are battens and wedges efficient and in good condition? <i>Yes</i> Are tarpaulins in good condition and in accordance with rule requirements? <i>Yes</i> Are lashings provided in accordance with rule requirements? <i>Yes</i>									

Particulars of fiddle, funnel and ventilator coamings:—

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways:—

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

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

Particulars of Gangway Cargo and Coaling Ports:—

Particulars of Scuppers and Sanitary Discharge Pipes:—

Shelter live deck scuppers at present discharge into bilges have now been permanently closed and 12 new scuppers fitted discharging overboard and provided with brass storm valves.

Particulars of Side Scuttles:—

Particulars of Guard Rails:—

Particulars of Gangways, Lifelines, etc.:—

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 <i>20'0" x 3'0"</i>	6'3"					
Forward Well						
State position of each freeing port ... { After Well:— (F. and A. position and height above deck edge) { 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.						

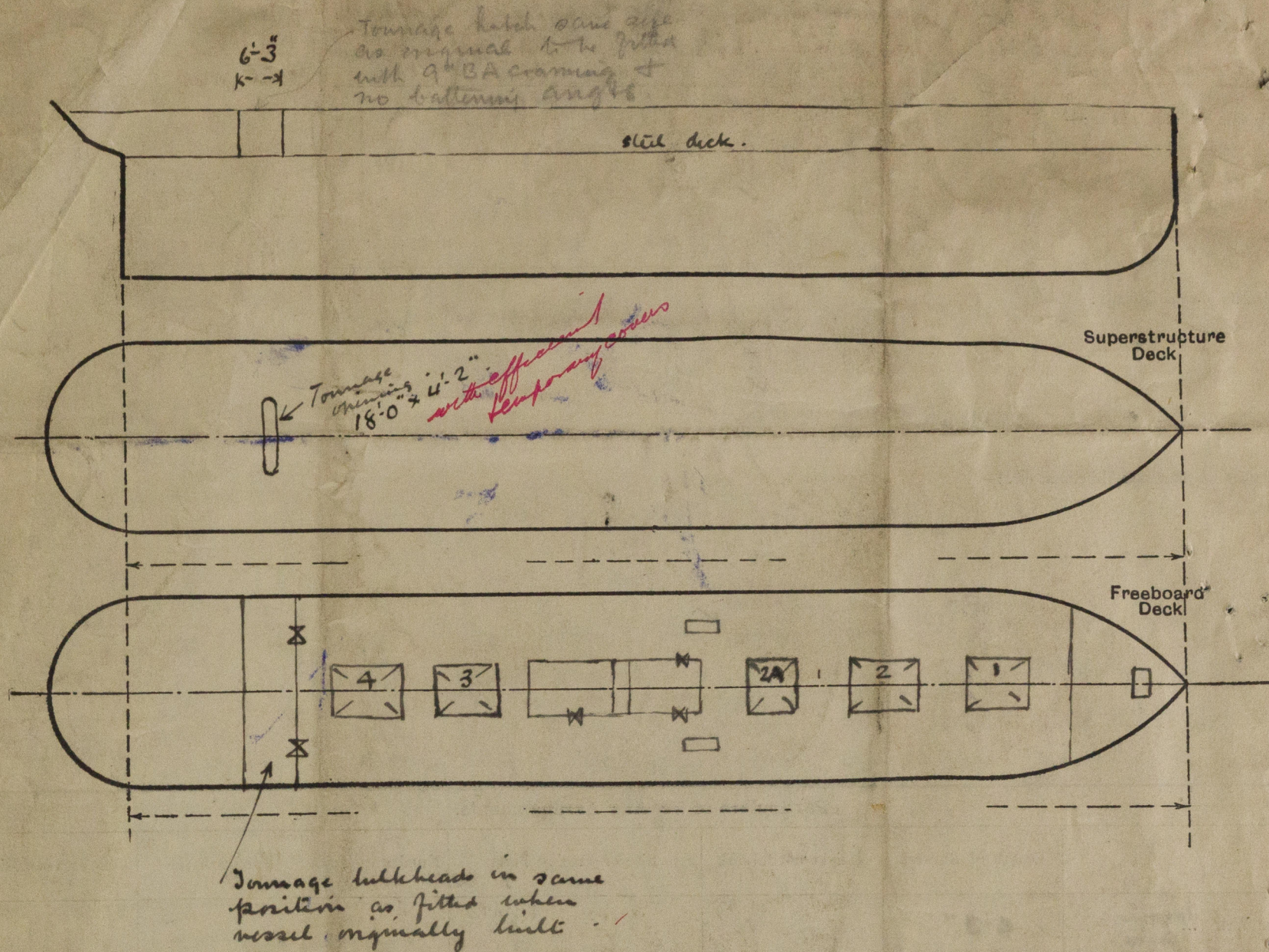
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	25'	3 1/2" x 3 1/2" x 38"	2'-8"	none	none	none	7'-6"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	✓	25'	3 1/2" x 3 1/2" x 38"	2'-6"	none	5'4" x 3'3"	13"	7'-6"
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
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	4'11"	3'4"	4'4" x 38"	4'-0"	Brackets as in the eng. spec. No brackets in the bulkhead in the bulkhead	2 @ 2'-0" x 1'-6" 1 @ 4'-6" x 2'-0"	3'7" 1'-4"	7'-6" 7'-6"
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	Intact
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	3" storm boards in riveted channels full height (some missing)
Bridge, Forward Bulkhead	
Forecastle Bulkhead	
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	2 - steel hinged doors operated from inside fiddle only 1 - steel hinged door 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 shewn on the following sketches:—



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

Vessel originally built with Tonnage opening but this was closed later.

The vessel is now having the Tonnage opening re-fitted.

The vessel has been surveyed in dry dock & afloat.

The vessel has been bought by Greek owners viz.

CEPHALONIAN MARITIME Co Ltd
ATHENS.

Port of Registry CEPHALONIA.

NEW Name of Vessel "DAPHNE"

Builder's name and yard number.

Sir J. Priestman & Co Sunderland.

Names of sister ships.

Owners

CEPHALONIAN MARITIME Co Ltd.

Fee £

12-15

Received by me

See Renewal Survey Report for fee



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