

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

18 MAY 1932

Index. No. 21646
(For London Office only.)

W131

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Forecastle Bridge & Poop

Port of Survey Dartmouth

Date of Survey 9th & 12th May 1932

Name of Surveyor A. T. Thomas

Particulars of Classification + 100 A. 1.

Ship's Name "Acta"

Nationality and Port of Registry British London

Official Number 149767

Gross Tonnage 4774

Date of Build 1912-7

Moulded Dimensions: Length 374.32 Breadth 51.0 Depth 29.24

Moulded displacement at moulded draught = 85 per cent. of moulded depth 10484 tons

Coefficient of fineness for use with Tables .775

Depth for Freeboard (D) 29.18

Depth correction (a) Where D is greater than Table depth (D-Table depth) R = (29.23 - 24.95) 2.879 = +12.32

Depth correction (b) Where D is less than Table depth (if allowed) (Table depth-D) R = 0.5

Round of Beam correction

Moulded Breadth (B) 51.00

Standard Round of Beam = $\frac{B \times 12}{50} = \frac{51.00 \times 12}{50} = 12.24$

Ship's Round of Beam = 12.2

Difference .26

Restricted to .53

Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.26}{4} \times (1 - .47) = -.03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	102.92	102.92	7.6	✓	102.92	Standard Height of Superstructure <u>7.24</u>
" overhang ...						" " R.Q.D. ✓
R.Q.D. enclosed ...						Deduction for complete superstructure <u>40.29</u>
" overhang ...						Percentage covered $\frac{S}{L} = 47\%$ ✓
Bridge enclosed ...	28.32	28.32	7.45	✓	28.32	" " $\frac{S_1}{L} = 47\%$ ✓
" overhang aft ...						" " $\frac{E}{L} = 47\%$ ✓
" overhang forward ...						Percentage from Table, Line A.
Fore enclosed <u>29.00</u> ...	44.68	44.68	7.45	✓	44.68	(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 ...						Deduction = <u>40.29</u> × <u>.38</u> = <u>-15.31</u> ✓
" forward ...						
Total ...	175.92	175.92			175.92	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
A.P. ...	47.43	1	47.43	48.00	47.43	1	47.43	Mean actual sheer aft = <u>excess</u>
$\frac{1}{2}$ L from A.P. ...	21.11	4	84.44	22.12	21.11	4	84.44	Mean actual sheer forward = <u>Deficient</u>
$\frac{3}{4}$ L " ...	5.22	2	10.44	5.53	5.22	2	10.44	Mean standard sheer forward
Amidships ...	-	4	-	-	-	4	-	Length of enclosed superstructure forward of amidships =
$\frac{3}{4}$ L from F.P. ...	10.43	2	20.86	9.78	9.78	2	19.56	" " aft of " =
$\frac{1}{2}$ L " ...	42.21	4	168.84	39.11	39.11	4	156.44	
F.P. ...	94.86	1	94.86	90.00	90.00	1	90.00	
Total ...			426.87				408.31	

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{18.56}{18} = 1.03$ (if limited on account of midship superstructure.)

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 29.23

Summer freeboard = 4.83

Moulded draught (d) = 24.40

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6"10.6"

Addition for Winter North Atlantic Freeboard (if required) = 3 $\frac{3}{4}$ "

Deduction for Fresh Water.

Displacement in salt water at summer load water line $\Delta = 10363$

Tons per inch immersion at summer load water line $T = 38.34$

Deduction = $\frac{\Delta}{40T}$ inches = 6 $\frac{3}{4}$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.775 + .28}{1.36} \times 56.65 = 60.61$

Depth Correction ... 12.32

Deduction for superstructures ... 15.31

Sheer correction53

Round of Beam correction03

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

Summer Freeboard = 58.12

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

Tropical Fresh Water Line above Centre of Disc ...	12 $\frac{3}{4}$	Tropical Fresh Water Freeboard ...	3-9 $\frac{3}{4}$
Fresh Water Line " " ...	6 $\frac{3}{4}$	Fresh Water " " ...	4-3 $\frac{3}{4}$
Tropical Line " " ...	6	Tropical " " ...	4-4
Winter Line below " " ...	6	Winter " " ...	5-4
Winter North Atlantic Line " " ...	9 $\frac{3}{4}$	Winter North Atlantic " " ...	5-7 $\frac{3}{4}$

26 MAY 1932

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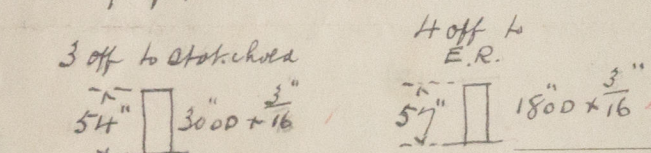
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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	on Deck to Store	Forward Hatchway to Fore A. Office	Forward Hatchway to Fore A. Office	Forward Hatchway to Fore A. Office	Forward Hatchway to Fore A. Office	Forward Hatchway to Fore A. Office	Forward Hatchway to Fore A. Office	Forward Hatchway to Fore A. Office	Forward Hatchway to Fore A. Office	Forward Hatchway to Fore A. Office
Dimensions of Hatchway	3'0" x 3'0"	14'6" x 7'10"	3'0" x 3'0"	6'0" x 3'6"	21'0" x 7'9"	11'0" x 7'9"	15'0" x 2'8"	6'0" x 2'9"	3'0" x 3'0"	18'0" x 4'3"
COAMINGS	Height above Deck ... 28"	30"	30"	30"	30"	30"	30"	30"	30"	30"
HATCH BEAMS	Number ... none	none	none	none	2A.B. 30" x 30"	30"	30"	30"	30"	30"
FORE AND AFTERS	Number ... 3	3	3	3	3	3	3	3	3	3
HATCH COVERS	Material ... steel	steel	steel	steel	steel	steel	steel	steel	steel	steel
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>yes</i></p> <p>Are battens and wedges efficient and in good condition? <i>yes</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>yes</i></p> <p>Are lashings provided in accordance with rule requirements? <i>yes</i></p>										

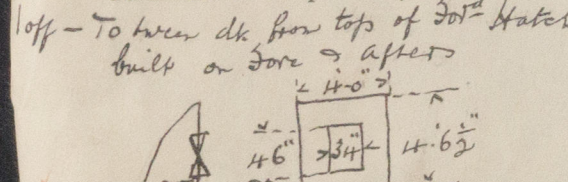
Particulars of fiddle, funnel and ventilator coamings: 7 storm covers on fiddle gratings in good order permanent attached. E.R. skylight 15' x 10' of steel 3/8" plate 3/8" high at Centre 12' at sides. 3 steel flaps at each side with 3 glass lights in each.



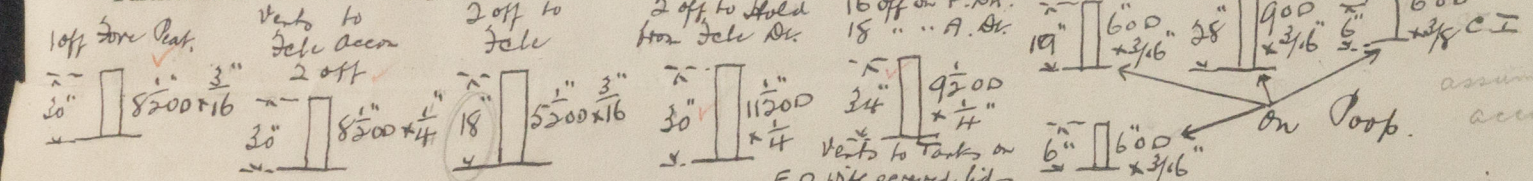
Particulars of Flush Bunker Scuttles:—

none

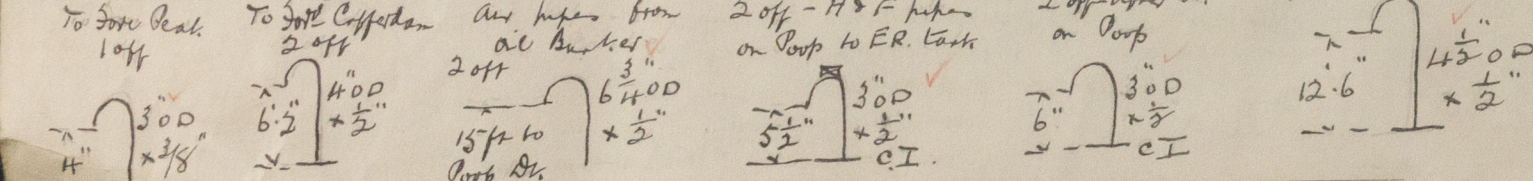
Particulars of Companionways:—



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:—

none

Particulars of Scuppers and Sanitary Discharge Pipes:— In Bridge space starboard side 1 W.C. with cast iron storm valve. In Poop: 2 W.C. starboard side. 1 W.C. Port with cast iron storm valve to both sides.

Particulars of Side Scuttles: In Poop on Port side 11' - 10" (2 without deadlights). Starboard side 9' - 10" (2 without deadlights). In Forecastle 16' - 8" (3 on starboard side without deadlights). In Bridge House 4 on P. & S. sides 11" dia with dead lights.

Particulars of Guard Rails:— on Forecastle Head double ball stanchions 3'9" high with 2 rails extending around Forecastle deck. Fore & aft with 3'10" steel bulwarks extending full length between Fore & Bridge. Bridge & Poop about 1/2" blating. on Poop triple ball stanchions 3'9" high with 3 rails extending completely around Poop deck.

Particulars of Gangways, Lifelines, etc.:— Gangways extending between Forecastle & Bridge & Bridge & Poop. on Port side of vessel 3'4" wide. 3" planks double ball stanchions at 6' pitch secured to tread with 2 through bolts. & double chain rail carried fore & aft. Stanchions 3'5" high.

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	108'25"	3'10"	24" x 22"	5	18.33 sq ft	103'75"
Forward Well	84'00"	4'0"	24" x 21"	4	14.00 sq ft	84'00"
<p>State position of each freeing port: After Well: 21'2" 26'4" 17'6" 18'0" 16'3" last 10 ft from B.A.E. (F. and A. position and height above deck edge). Forward Well: 18'0" 8'0" 16'1" 15'5" 36'6" at 6" above deck.</p> <p>State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— No shutters & no rail across.</p> <p>Additional area where sheer is less than standard.</p>						

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	3'8"	7/16"	6'3" x 3/8" BA	abt 33"	brackets top & bottom	none	✓	7'6"
Raised Quarter Deck Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead	4'6"	5/16"	3'3" x 3/8" BA	abt 30"	Bridge end support by B. bulkhead	4'8" x 2'0"	36"	7'6"
Bridge, Forward Bulkhead	4'6"	3/8"	Cased in saloon	abt 30"	✓	4'13" x 2'0"	4'10" to base edge of light	7'6"
Forecastle Bulkhead	vertical plating	5/16"	3'2" x 3/8" BA	36"	brackets to top	3'0" x 2'0"	19"	7'6"
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Superstructure Decks	19"	3/8"	3'2" x 3/8" BA	36"	brackets to top fiddle deck	3'2" x 2'0"	15'2" to W.D.	7'6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	✓	✓	✓	✓	✓	✓	✓
Deckhouses on Flush Deck Ships	✓	✓	✓	✓	✓	✓	✓	✓

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	no openings
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	3 steel doors opening from both sides into Pump Room & Store Room
Bridge, Forward Bulkhead	no openings only 9 side lights to Bridge accommodation
Forecastle Bulkhead	4 sides 3 steel doors P.O.S. open both sides: 2 tank doors in front side
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	3 steel doors on P.O.S. sides leading to E.R. galley & fiddle with ladders open sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

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:—

Description of
Dimensions of
COAMINGS

HATCH
BEAMS

FORE
AND
AFTERS

HATCH
COVERS

Spacing of Cleats
Number of Tarpaulins

Are wood fore and
Are battens and
Are tarpaulins in
Are lashings pro

Particulars of fiddle

skylight

3 off to starboard

54" 30"

Particulars of Flushing

Particulars of Compartment

over deck from
up on fore

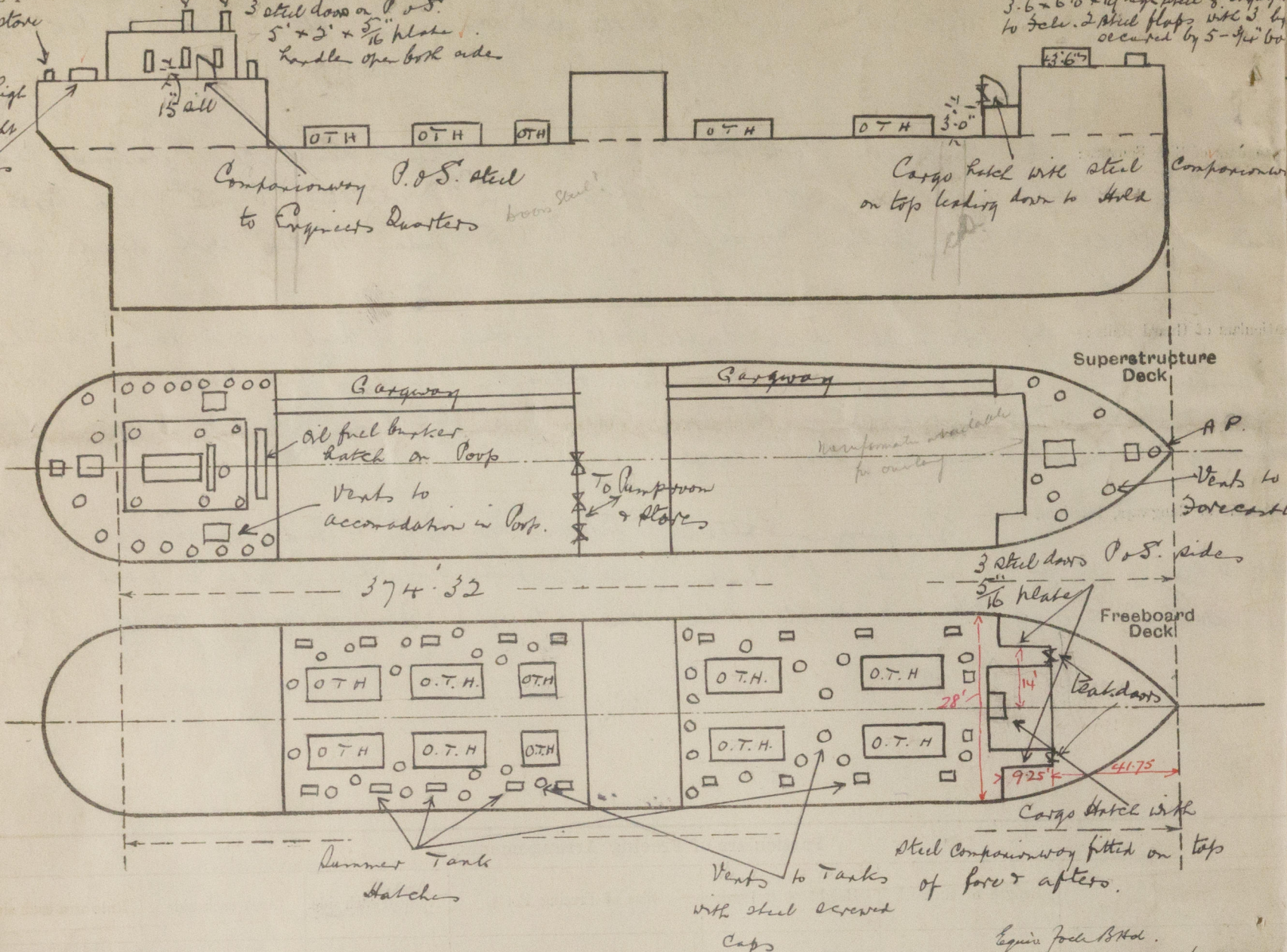
Particulars of Ventilation
Vents to
Fore
3" 20"
30"

Particulars of Air Pipes

2"

6.5"

Particulars of Gangways



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

Forecastle, Bridge, & Poop oil Tanker

Convention foreboard assignment requested.

Builder's name and yard number *Greenock & Grangemouth Dockyard Co Ltd*

Names of sister ships

Owners *Oil and Molasses Tankers Ltd*

Fee £ *12 : 15 : -*
1 : 5 : 3 Expt.

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