

Lloyd's Register of Shipping.

Index. No.

30218

(For London Office only.)

24 JUN 1932

SURVEYS FOR FREEBOARD.

Now Named "PORTHREPTA" of CARDIFF (26.10.39)

GLASGOW REPORT No. 52648

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having RAISED QUARTER DECK, BRIDGE AND FORECASTLE.

Port of Survey GLASGOW.

(Type of Superstructures.)

Date of Survey 22nd June 1932.

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

"KYANITE"

BRITISH
GLASGOW.

146,241

643

1922-1

Name of Surveyor D. TURNER.

Moulded Dimensions: Length 174.45' Breadth 28.00' Depth 13.5' 1175

Moulded displacement at moulded draught = 85 per cent. of moulded depth 1,100 tons

Coefficient of fineness for use with Tables 732

Particulars of Classification 100 A.1.

Depth for Freeboard (D)

Moulded depth ... 13.50'

Stringer plate .40"03'

Sheathing on exposed deck

$$T \left(\frac{L-S}{L} \right) =$$

Depth for Freeboard (D) = 13.53'

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R =

$$(13.53 - 11.65) 1.344 = +2.53$$

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

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) 28.00'

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 6.72$$

$$\text{Ship's Round of Beam} = 8.2$$

Difference 1.78

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.78}{4} \times .7225 = -.10$$

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 ...	95.81'	95.81	4'-0"		95.81
" overhang ...	✓	✓	✓	✓	✓
Bridge enclosed ...	11'-0"	11.00	7'-6"		11.00
" overhang aft ...	✓	✓	✓	✓	✓
" overhang forward ...	✓	✓	✓	✓	✓
" cle enclosed ...	25.89	25.89	7'-0"		25.89
" overhang ...	11'-25"	2.76	7'-0"		2.76
Trunk aft ...	✓	✓	✓	✓	✓
" forward ...	✓	✓	✓	✓	✓
Tonnage opening aft ...	✓	✓	✓	✓	✓
" forward ...	✓	✓	✓	✓	✓
Total ...	138.23	135.46			135.46

Standard Height of Superstructure 6.0

" " R.Q.D. 3.498

Deduction for complete superstructure 23.47

$$\text{Percentage covered } \frac{S}{L} = 79.10\%$$

$$\frac{S_1}{L} = 77.52\%$$

$$\frac{E}{L} = 77.52\%$$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required)) 72.25%Percentage from Table, Line B.
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

$$\text{Deduction} = 23.47 \times .7225 = -16.96$$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	27.47	1		27.47	30.402	36.02	27.47	1	27.47
$\frac{1}{2}$ L from A.P. ...	12.22	4		48.88	13.5	16.83	12.22	4	48.88
$\frac{3}{4}$ L " ...	3.02	2		6.04	3.5	4.06	3.02	2	6.04
Amidships ...		4						4	
$\frac{3}{4}$ L from F.P. ...	6.04	2		12.08	5.5	5.58	5.58	2	11.16
$\frac{1}{2}$ L " ...	24.45	4		97.80	22.5	22.32	22.32	4	89.28
F.P. ...	54.95	1		54.95	51	51.00	51.00	1	51.00
Total ...				247.22					233.83

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 =

" " aft of

Sheer aft increased by virtue of excess height of intact superstructure.

$$\text{Actual ht. of R.Q.D.} = 4.00$$

$$\text{Standard} = \frac{3.498}{.502}$$

$$\times 12 = 6.074$$

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{13.39}{18} \left(.75 - \frac{.3955}{.3545} \right) = +.26$$

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 = 17.53

Summer freeboard = 4.46

Moulded draught (d) = 13.07

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.27 = 3 1/4

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

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 1360 \text{ tons}$$

Tons per inch immersion at summer load water line

$$T = 9.45$$

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

$$= \frac{1360}{40 \times 9.45} = 3.51 = 3 1/2$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$$\frac{.732 + .68}{1.36} = \frac{1.412}{1.36}$$

Depth Correction ... 2.53

Deduction for superstructures ... 16.96

Sheer correction ... 26

Round of Beam correction ... 10

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ... 48.00

$$50.79 - 17.06 + 33.73$$

$$\text{Summer Freeboard} = 53.47$$

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

Tropical Fresh Water Line above Centre of Disc ...	6 1/2"
Fresh Water Line " " ...	3 1/2"
Tropical Line " " ...	3 1/4"
Winter Line below " " ...	3 1/2"
Winter North Atlantic Line " " ...	5 1/4"

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " ...

Winter North Atlantic " " ...

4' 5 1/2"

3' 10 3/4"

4' 2"

4' 2 1/4"

4' 8 3/4"

4' 10 3/4"

MARKING FORM
31 AUG 1932
RECEIVEDMARKING FORM
4 OCT 1932
RECEIVEDMARKING FORM
26 AUG 1932
RECEIVED

002062-002070-0174 1/2

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		No 1	No 2	BUNKER HATCHWAY on CASING TOP					
Dimensions of Hatchway		33' 0" x 15' 6"	25' 8" x 15' 6"	5' 6" x 14' 0"					
COAMINGS	Height above Deck	33"	33"	15"					
	Thickness	44"	38"	26"					
	Stiffeners	7" x 3" x 40" BA and Sides & Ends	7" x 3" x 40" BA and Sides & Ends	NONE					
	Brackets, Stays	Port: 3 3/4" dia Starboard: 3 3/4" dia	2 3/4" dia	NONE					
HATCH BEAMS	Number	5	4	NONE					
	Spacing	5' 6"	5' 1 1/2"						
	Scantling and Sketch	3 1/2" x 3" x 24"	4" x 3" x 26"						
	PLATE	16" x 30"	14" x 14"						
FORE AND AFTERS	Number	NONE	NONE	NONE					
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
HATCH COVERS	Material	W. W.	W. W.	W. W.					
	Thickness	2 3/4"	2 1/2"	2 1/2"					
	How fitted	FORE & AFT	F & A	F & A					
	Bearing Surface	3 1/2"	3 1/2" at ends	2 1/2"					
Spacing of Cleats		24"	24"	24"					
Number of Tarpaulins		2	2	2					

*Are wood fore and afters steel shod at all bearing surfaces?

Are battens and wedges efficient and in good condition?

Are tarpaulins in good condition and in accordance with rule requirements?

Are lashings provided in accordance with rule requirements?

Yes.

Yes.

Yes.

(Ringbolts fitted for lashing)

Particulars of fiddle, funnel and ventilator coamings:—

Stokehold gratings covered by strong steel hinged covers.
Fiddle, funnel and ventilators in efficient condition.
Engine skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

One steel companionway 2' 7" x 3' 6" x 4' 0" high on Upper Deck leading to enclosed G. P. Store; door of steel with 19" sill; door operated both sides.
One entrance (to Engineers Accommodation) on Raised Quarter Deck at after end of G. P. Store; door of 1 1/2" thick wood, solid; with 15" sill; door operated both sides.
One entrance (to Officers Accommodation) on Bridge Deck at port side of steel Chart House; door of wood, solid; 1 1/2" thick; with 12" sill; door operated both sides.

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

1 Ventilator on Forecastle Deck	6" dia. Coaming	39" x 28"	led to Fore Peak Store.
4 " " " "	8" " "	36" x 34"	Forecastle.
1 " " " "	12" " "	39" x 36"	Hold. (Fore)
2 " " Bridge Deck	6" " "	30" x 24"	Officers Accom.
1 " " Raised Gr. Deck	11" " "	36" x 36"	Hold. (After end)
1 " " " "	8" " "	36" x 26"	Engine Accom.
1 " " " "	6" " "	6" M. V.	"
1 " " " "	6" " "	30" M. V.	"

All ventilators constructed in accordance with Rules and coamings closed with tight fitting steel caps.

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

1 C.I. Air pipe on Forecastle Deck	8" high x 3 1/2" dia.	from Fore Peak Tank.
2 C.I. " " " "	Upper Deck, fwd. 8"	x 3 1/2" " " No. 1 d. b. tank.
2 C.I. " " " "	Raised Gr. Deck	8" " " " No. 2 " "
1 W.I. " " " "	aft. 9"	x 2" " " After Peak Tank.

All air pipes have no closing appliances and no snifting holes are drilled at top of blinds. Canvas covers provided for closing.

Particulars of Gangway Cargo and Coaling Ports:—

2 Openings (1 p. & 1 s) 1' 9" x 1' 8" x 2' 4" sill in Bunker basing sides with steel hinged door, operated one side.



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Particulars of Scuppers and Sanitary Discharge Pipes :—

1	Sanitary Discharge from	Crews W.C. on	Upper Deck	led below	Upper Deck	and fitted at ship's side with storm valve
1	"	Eng'rs' W.C.	Raised P. Deck	"	R. 4 th Deck	" " " " " "
1	Scupper	" Bath	"	"	"	" " " " " "
2	" (1 p. & 1 s.)	" Deck aft	"	"	"	No storm valves fitted.

Particulars of Side Scuttles :—

All side scuttles below Greenboard Deck fitted with hinged dead lights (2 off in length Acc^d aft. 18" below Gboard)
 Side scuttles to crew's spaces in Forecastle fitted with hinged dead lights.
 Side scuttles to Bridge Accommodation fitted with hinged dead lights at shell only. No deadlights on Bridge Front
 or Bridge after Bulkhead.

Particulars of Guard Rails :—

Guard Rails on Forecastle Deck, 3' 3" high, 2 rods, and stanchions spaced 4' 6" - 5' 0" apart.
 Steel Bulwarks " Foreboard Deck in Forward well 4' 2" high, efficiently constructed and supported
 " " " Bridge Decks front and sides 3' 0" " " " "
 " " " Raised Quarter Deck. ----- 3' 0" " " " "

Particulars of Gangways, Lifelines, etc. :—

One row of stanchions fitted in sockets rivetted to B.A. stiffener on hatch coaming, starboard side, 4'-0" high, with 1 1/4" dia. eye on top of each. ~~No lifeline fitted.~~ Stanchions spaced 8'-0" apart.
[Fore Well]

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	95'-10"	3'-0"	{ 2'-9" x 1'-6" 2'-6" x 1'-6"	{ 3 [*] 2 }	{ 19½ f. 75 f. ✓	192½
Forward Well	36'-9"	4'-2"	2'-6" x 1'-6"	3	11.25 f ✓	10½

State position of each freeing port. } After Well:— (FROM BOGE, END BHD) 7'-8" 29'-9" 39'-7" 17'-8" and 50'-8" 8" above deck edge. ✓
(E. and A. position and height above deck edge) } Forward Well:—(" FRONT) 5'-4", 13'-10" and 23'-0" all 13" above deck edge. ✓

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Steel plate balanced shutters. ✓
** These have horizontal 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	✓	✓	✓	✓	✓	✓	✓	✓
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	26" ✓	26" ✓	6" x 3" x 38" BA ✓	30" ✓	Bkts tp and bottom ✓	None ✓	None ✓	
Bridge, Forward Bulkhead ...	32" ✓	38" ✓	6" x 3" x 38" BA ✓	30" ✓	Bkts at tp ✓	None ✓	None ✓	4'-6"
Forecastle Bulkhead	24" ✓	24" ✓	3½ x 3" x 26" ✓	36" & 30" ✓	None ✓	4'-6" x 1'-10" ✓	18" ✓	4'-0"
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Free board or Raised Quarter Decks ...	26" ✓	26" ✓	2½ x 2½ x 32" ✓	24" ✓	Bkts at tp ✓	4'-7" x 1'-11" ✓	18" ✓	6'-9"
Exposed Machinery Casings on Superstructure Decks	✓	✓	✓	✓	✓	✓	✓	✓
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	...	...	✓
Raised Quarter Deck Bulkhead	...	✓	} no openings
Bridge, After Bulkhead	...	✓	
Bridge, Forward Bulkhead	...	...	✓ no openings.
Forecastle Bulkhead	...	...	Steel doors, operated from both sides. ✓
Exposed Machinery Casings on Free Board or Raised Quarter Decks	...	...	Steel doors, operated from one side only.
Exposed Machinery Casings on Superstructure Decks	...	...	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	✓
Deckhouses on Flush Deck Ships	...	...	✓

