

11 FEB 1932

Index No. **28118**
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No. 99828.

Computation of Freeboard for Steamer, ~~Sailing Ship~~, Tanker

SHELTER DECK WITH TONNAGE OPENINGS:

Port of Survey LIVERPOOL:

EFKROS

(Type of Superstructures.)

M.O.T.

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

ONEH

BRITISH.
LIVERPOOL:

140654.

1972
1931.911.

1919: 9.

Moulded-Dimensions: Length 290'-0" Breadth 42'-4" Depth 21'-2"
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 4360 tons
 Coefficient of fineness for use with Tables .691

Name of Surveyor J.V.C. MALCOLMSON.
 Particulars of Classification PS. 100 A1:
Shelter Deck with freeboard.

Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth	...	21'-2"-16"	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	42'-33"
Stringer plate	...	40'-04"	(20-20-19-33) 2-231 = + 1-94"		Standard Round of Beam = $\frac{B \times 12}{50}$	10'-16"
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	10'-2"
					Difference	.34
Depth for Freeboard (D) =		21'-20"	If restricted by superstructures		Restricted to	
					Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$= \frac{.34}{4} \times .06 = \text{nil}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	108'-00"	108'-00"	6'-8"	/	108'-00"
" overhang ...	52'-00"	26'-00"			
R.Q.D. enclosed	✓				
" overhang	✓				
Bridge enclosed...	✓				
" overhang aft ...	✓				
" overhang forward	✓				
Trunk enclosed ...	122'-00"	122'-00"	6'-8"	/	122'-00"
" overhang ...	✓				
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	8'-00"	17'-00"		/	17'-00"
" forward					
Total ...	290'-00"	273'-00"			273'-00"

Standard Height of Superstructure 6'-40"
 " " R.Q.D. ✓
 Deduction for complete superstructure 34'-67"
 Percentage covered $\frac{S}{L} = 100\%$
 " " $\frac{S_1}{L} = 94.14\%$
 " " $\frac{E}{L} = 94.14\%$
 Percentage from Table, Line A. 92.78%
 (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 = $34.67 \times .9278 = - 32.17'$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	39'-00"	1		39'-00"	21'-00"	21'-00"	1		36'-20"
$\frac{1}{8}$ L from A.P. ...	17'-35"	4		69'-40"	8'-4"	8'-49"	4		64'-44"
$\frac{2}{8}$ L " ...	4'-29"	2		8'-58"	1'-5"	2'-12"	2		7'-96"
Amidships ...	✓	4		0	0	✓	4		✓
$\frac{3}{8}$ L from F.P. ...	8'-58"	2		17'-16"	3"	4'-56"	2		16'-54"
$\frac{4}{8}$ L " ...	34'-71"	4		138'-84"	18"	18'-26"	4		133'-84"
F.P. ...	78'-00"	1		78'-00"	53'-25"	53'-00"	1		75'-20"
Total ...				350'-98"					334'-18"

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{16.80}{18} (.75 - .50) = - 1.25'$

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 = 21'-20"
 Summer freeboard = .94
 Moulded draught (d) = 20'-26"

Correction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 5.06 = 5"

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

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 4980$

Tons per inch immersion at summer load water line

T = 23.5Deduction = $\frac{\Delta}{40 T}$ inches= 5.3 = 5 $\frac{1}{4}$ "

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

 $\frac{.68 + .691}{1.36} = \frac{1.371}{1.36}$

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ...

41'-00"
41'-33"

	+	-
Depth Correction	1-94	-
Deduction for superstructures	-	32-17
Sheer correction	.23	-
Round of Beam correction	-	-
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	2-17	32-17

Summer Freeboard = 11'-33"SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:

Tropical Fresh Water Line above Centre of Disc	...	10'-4"
Fresh Water Line	"	5'-4"
Tropical Line	"	5'
Winter Line	below	5'
Winter North Atlantic Line	"	7'

Tropical Fresh Water Freeboard	...	0'-11 $\frac{1}{4}$ "
Fresh Water	"	0'-6"
Tropical	"	0'-6 $\frac{1}{4}$ "
Winter	"	1'-4 $\frac{1}{4}$ "
Winter North Atlantic	"	1'-6 $\frac{1}{4}$ "

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
SHELTER DECK					UPPER DECK				
Description of Hatchway	Nº1	Nº2	Nº3	Nº4	Nº1	Nº2	Nº3	Nº4	
Dimensions of Hatchway	12' x 16' 1"	26' x 16'	12' x 16' 1"	26' x 16'	22' x 16' 1"	16' 1" x 12' 6"	26' 6" x 16' 0"	12' 6" x 16' 1"	26' 6" x 16'
COAMINGS	Height above Deck	30"	30"	30"	30"	30"	30"	30"	30"
	Thickness	44"	44"	44"	44"	44"	44"	44"	44"
	Sides	44"	44"	44"	44"	44"	44"	44"	44"
	Stiffeners	7x3 BULB	7x3 BULB	7x3 BULB	7x3 BULB	7x3 BULB	7x3 BULB	7x3 BULB	7x3 BULB
HATCH BEAMS	Brackets, Stays	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Number	2	4	2	4	2	4	2	4
	Spacing	4' x 4' x 4'	5' x 5' x 5'	5' x 4' x 5'	5' x 2' x 5'	5' x 4' x 5'	5' x 2' x 5'	5' x 4' x 5'	5' x 6' x 5'
	Scantling and Sketch	17" x 6/10	17" x 6/10	17" x 6/10	17" x 6/10	17" x 6/10	17" x 6/10	17" x 6/10	17" x 6/10
FORE AND AFTERS	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	3"
	Number								
	Spacing								
	Unsupported Lengths								
HATCH COVERS	Material	RED. PINE				RED. PINE			
	Thickness	2 3/4"				2 3/4"			
	How fitted	F.A.				F.A.			
	Bearing Surface	3 1/2"				3"			
Spacing of Cleats	18" x 18"	23 1/2"	23 1/2"	23 1/2"	23 1/2"	24"			
Number of Tarpaulins	3	3	3	3	3	3			

Particulars of fiddle, funnel and ventilator coamings: — Fiddle 10'-10" above upper decks.

Fiddle openings fitted with steel gratings and strong steel hinged covers.

Engine Room skylight of steel with steel hinged flaps.

Galley skylight

Bunker Hatch 14'-6" x 5'-0" Coaming 7' x 3' x 37" B.A. Conn. 3" Fitted F.V.A. Deck spaced 26"

2 Tarpaulins

Particulars of Flush Bunker Scuttles: —



(NONE.)

POOP: HOUSE ENTRANCE TO CREWS: SEE ELEVATION PAGE 4.

Particulars of Companionways: —

NONE.

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

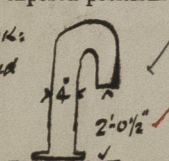
Suitable wooden plugs and canvas covers on board.

(see plans page 4.)

POSITION	NO.	DIAM.	HEIGHT	LOADING	THICKNESS OF COAMING
FORWARD	1	16 1/2"	35"	0/10	0/10
"	2	16 1/2"	36"	0/10	0/10
MIDSHIPS	1	16 1/2"	36"	0/10	0/10
AFT	4	16"	36"	0/10	0/10
"	1	5 3/4"	89"	EFFECTUALLY STATED 1/8"	TO TUNNEL
"	5	6"	6"	3/4" LEAD TO TUNNEL	TO TUNNEL
Top Poop House	1	9 1/2"	18"	1/4" TO TUNNEL	ESCAPE

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

1. AIR PIPE TO FORE PEAK: fitted with wood plug and canvas cover.



All other air pipes to Double Bottoms and aft peak Tank are flush with upper deck, and have a screw brass plug.

All these air pipes are 2 1/2" diameter, except A.P. air pipe which is 4" diameter.

Particulars of Gangway Cargo and Coaling Ports: —

NONE.

Scupper and Sanitary Discharge Pipes —

Scupper in Shelter Tunnels and Below Freeboard Deck are about 3'-0" below deck. Those in Shelter Tunnels are fitted with cast steel storm valves at shell and those below Freeboard Deck are fitted with brass storm valves at shell.

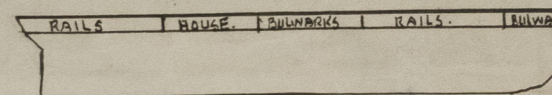
Deck Scupper are of collision patent type, for protection see sketch page 4.

2 Port and 2 starboard to brass quarter aft @ 10" fitted with deadlights (Rungid).

Particulars of Guard Rails: —

Guard rails on Fore Deck and After Deck 3'-4" high with 2 rails: stanchions spaced 5' apart.

Bulwarks Forward and Amidships 3'-6" high with 6 1/2" bulb top bars, and stays of 8" bulb bar section spaced 5'-5" apart.



Particulars of Gangways, Lifelines, etc. —

NONE.

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
MIDSHIPS:	53'-3"	3'-6"	24" x 18"	2	6	✓
Forward Well	✓	✓	✓	✓	✓	✓

State position of each freeing port (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: — SHUTTERS WITH STRONG HINGES.

Additional area where sheer is less than standard.

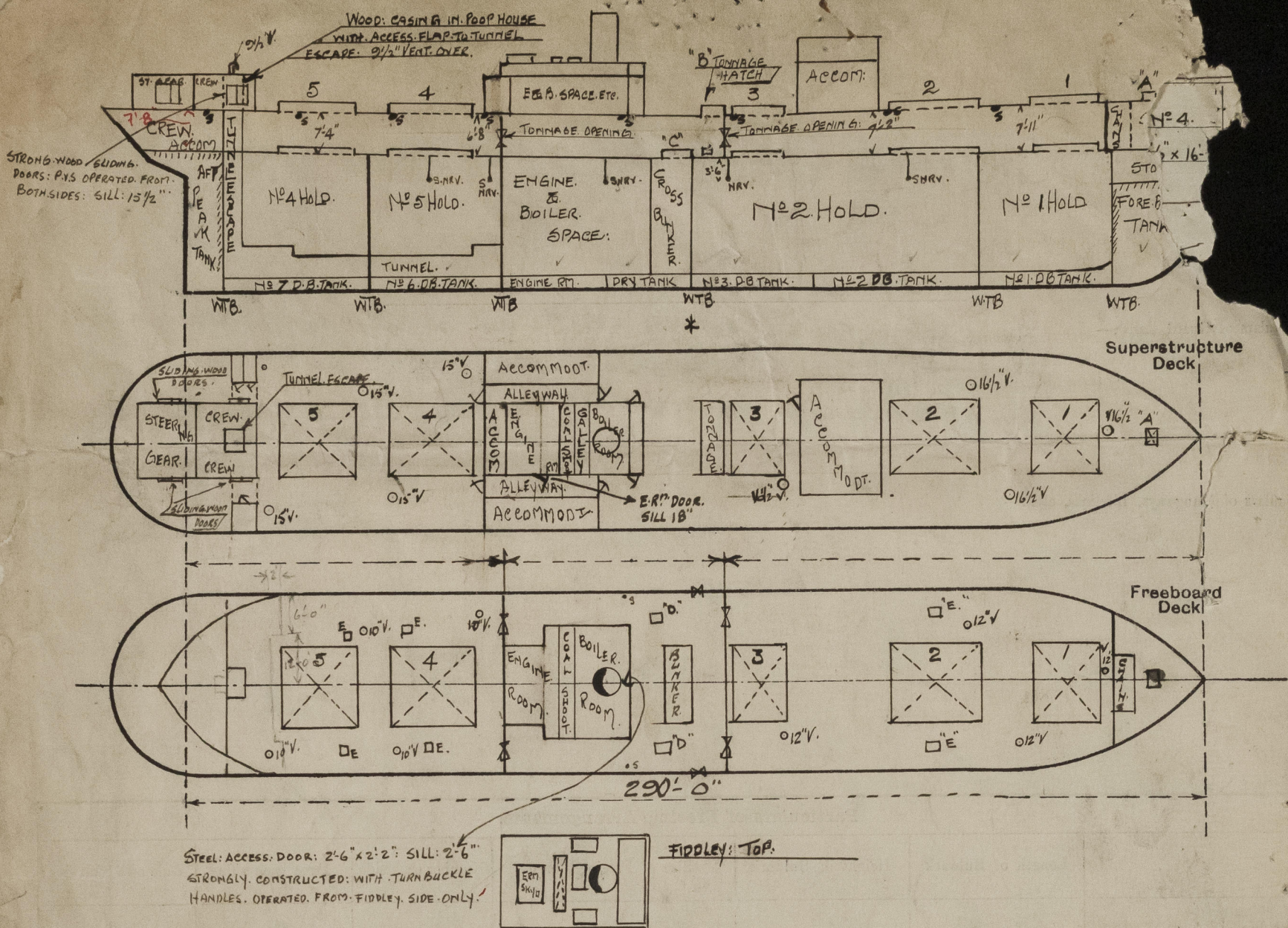
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	VERT	26"	3 1/2 x 2 1/2 x 5/16"	2'-6"	NONE	1 PORT: 1 STARBOARD 4'-1 x 3'-0"	20"	6'-9"
Raised Quarter Deck Bulkhead	✓	—	—	—	—	—	—	—
Bridge, After Bulkhead	✓	—	—	—	—	—	—	—
Bridge, Forward Bulkhead	VERT	5/16"	3 1/2 x 2 1/2 x 5/16"	2'-3"	NONE	1 PORT: 1 STARBOARD 5'-2 x 3'-0"	6"	6'-9"
Forecastle Bulkhead	✓	—	—	—	—	—	—	—
Trunk, Aft	✓	—	—	—	—	—	—	—
Trunk, Forward	✓	—	—	—	—	—	—	—
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	—	—	—	—	—	—	—
Exposed Machinery Casings on Superstructure Decks	7/20	6/20	4' x 3' x 7/20	31"	14" BUTTS TOP & BOTTOM, 5" LUGS TO DECK	24 1/2' x 57 1/2'	19"	11'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	50	32	3' x 3' x 3/8"	2'-3"	14" BUTTS TOP & BOTTOM, 5" LUGS TO DECK, BRTS. ON ALTERNATE STIFF TOP ONLY	NONE	NONE	6'-4"
Deckhouses on Flush Deck Ships	7/20	5/20	—	—	—	3 PORTUGUES @ 18" 2" @ 12" PORTABLE DEADLIGHTS	—	—

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

Poop Bulkhead	3" SHIFTING BOARDS IN PERMANENTLY RIVETED CHANNELS. FITTED FULL HEIGHT.
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	3" SHIFTING BOARDS IN PERMANENTLY RIVETED CHANNELS. FITTED FULL HEIGHT.
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	Steel hinged doors secured from both sides (locks).
Deckhouses on Flush Deck Ships	PORTHOLES ONLY: SEE ABOVE.

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, 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:—

SMALL HATCHWAY OTHER THAN THOSE SHOWN ON PAGE 2:

HATCH: "A" ON SHELTER DECK FORWARD:— 34' x 20' COAMING: 2 1/2" x 10' FILLER WITH DECK COVER AND TARPULIN

Tonnage Hatch: "B" " " MIDSHIP:— 8'-0" x 16'-0" 12 1/2" x 3" x 1/8" (Shelter Deck). COAMING: CONSISTS OF BULB ANGLE AND PLATE WITH COPE TOP: 3" WOOD. COVERS: WITH 2 1/2" REST BARS. LASHINGS WITH A STRETCHING SCREW AND CROSS LASHING (EFFICIENT). 1 HATCH BEAM CR: SCANTLING: AS PER HATCH BEAMS ON FREEBOARD DECK.

BUNKER
Tonnage Hatch: "C" ON UPPER DECK MIDSHIP:— 8'-0" x 16'-0" WITH COAMING: 18" HIGH: CONSISTING OF BULB ANGLE AND PLATE EXTENSION WITH COPE TOP: 3" WOOD. COVERS: WITH 2 1/2" REST BARS. 1 HATCH BEAM AT CENTRE SCANTLING: AS PER HATCH BEAMS ON FREEBOARD DECK. CLEATS 22" APART. TARPULINS AND EFFICIENT BATTENING ARRANGEMENTS.

"D" COAL HATCH:— 19'-15" x 5'-11" x 2'-11" COAMING: 18" HIGH (BULB ANGLE & PLATE WITH COPE TOP). REST BAR 3". WOOD: HATCHES 3". TARPULINS AND EFFICIENT BATTENING ARRANGEMENT. CLEATS: 20" APART.

"E" ESCAPE OPENINGS:— 3'-0" x 2'-6": NO COAMINGS AND FITTED WITH ~~RESTED~~ PLATES: W.T. SECURED BY CLOSE SPACED BOLTS.

Builder's name and yard number Swan Hunter & Wigham Richardson Ltd: Sunderland:

Names of sister ships "ETRIP"

Owners James Moss & Co: (Moss. Ld.) Ltd:

Fee £ 9 : 7 : 0. Received by me

Name of Ship *TEFKROS*

Freeboard Report Examined

(Date) *April 1951*

Signed *[Signature]*

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