

SURVEY FOR FREEBOARD

E. EMPIRE KATY

~~WITH~~ TIMBER DECK CARGO
WITHOUT

Builders' Name and No. of Ship GOOLE S.B. & R. Co., Ltd

GOOLE. N° 402.

Owners MINISTRY of WAR TRANSPORT.

(Magg) THE TRUSTEES OF THE PORT OF HOEN - HOEN
~~REDDER & MYKINZIES LTD. LONDON~~

Port and Date of survey GOOLE, DURING CONSTRUCTION.

Name of Surveyor E. HENDERSON.

Names of Sister Ships EMPIRE SAMSON, EMPIRE JESTER,
EMPIRE SOPHY.

Service Endorsement if any

ALL SEASONS

SUMMER FREEBOARD recommended amidships from centre of disc to top of deck line, (.....wood.....steel)

22: 22

TROPICAL FRESH WATER LINE above centre of disc Corresponding Freeboard

FRESH WATER LINE " " " 2 1/2" " " 1-1 1/2"

TROPICAL LINE " " "

WINTER LINE below " " " "

[illegible]

SUMMER TIMBER FREEBOARD recommended amidships from top of deck line

TROPICAL FRESH WATER Timber line above L.S. Corresponding Freeboard

FRESH WATER " " " " " "

TROPICAL " " " " "

WINTER " " below " " "

WINTER NORTH ATLANTIC " " " " "

Number of years recommended for load line certificate

DATE of ISSUE 22-5-46.

DATE of Fixing. 21-5-50

Assign Notes

The scantlings and protective arrangements being in accordance with the Load Line Rules it is submitted that the freeboards be assigned

Chief Surveyor

Passed at a meeting of the Committee of Management of the British Corporation Register of Shipping and Aircraft

on the 6th. June. 1945.

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Secretary

012827-012835-0149 1/10

Name of Ship *SIR BERNARD REILLY*

Freeboard Report Examined

(Date) *2 May 1957*

Signed *[Signature]*

0149 ²/₁₀

COMPUTATION OF FREEBOARD

Length on summer load line 105'0" Moulded Breadth 30'0" Moulded Depth 13'6" Depth of Keel 7"
Moulded displacement (ex bossing) at moulded draught of 85 per cent. of moulded depth 532.5 Tons
Co-efficient of fineness for use with tables $\frac{\Delta \times 35}{L \times B \times D \times .85} = .5156$ WSR .68
Displacement and tons per inch immersion in salt water at summer load line 540 @ 5.83 T.P.I. See Engr. Logg
Moulded depth 13.500 Deduction for Fresh Water $\frac{\Delta}{40T} = 2.5$ inches
Stringer Plate .36 .030 Round of Beam Correction
Sheathing on exposed deck T $\left(\frac{L-S}{L}\right)$ - Ships Round of Beam 7.50 inches
Rise of floor (in sailers) - Standard Round of Beam $\frac{B \times 12}{50} = 4.20$
Depth for Freeboard (D) 13.53 Difference 30
Table Depth 7/15 7.00 Restricted to
Depth Correction 7/130 6.53 Correction $\frac{\text{Difference}}{4} \times \left(1 - \frac{E}{L}\right) = .075 \times 1$
If restricted by superstructures 5.275 on = .08 off.

	Enclosed Length	Length of Overhang	Height	Mean Covered Length (S)	Height Correction	Effective Length (E)
Poop						
Raised Quarter Deck						
Bridge		F				
		A				
Forecastle						
Trunk Aft						
" Forward						
Tonnage Opening Aft						
" " Forward						
Totals						

Standard Height of Superstructure -
" " R.Q.D. -
Percentage covered S/L = -
" " E/L = -
" from Table line A, B, (corrected for absence of forecastle if required)
Percentage from Table by interpolation for Bridge less than .2L if required = -
Deduction = -
Percentage from Table for Tankers (or Timber ships) = -
Deduction = -

Station	Actual Sheer	Standard Sheer	Effective Sheer	S.M.	Product
A.P.	37	20.50	20.50	1	20.50
$\frac{1}{8}$ L from A.P.	18	9.12	9.12	4	36.48
$\frac{1}{8}$ L from A.P.	7	2.26	2.26	2	4.52
Amidships	-	-	-	4	-
$\frac{1}{8}$ L from F.P.	-2	4.51	-2.00	2	-4.00
$\frac{1}{8}$ L " "	4 1/2	18.25	4.50	4	18.00
F.P.	35	21.00	35.00	1	35.00
				18	110.50
Effective Mean Sheer					6.139
Standard " " .05L + 5					10.250
Difference					4.111

Mean Actual sheer aft = More than 1.
" Standard " " "
Mean Actual sheer forward = Less than 1.
" Standard " " "
Length of enclosed superstructure forward of amidships = Length of Ship
Length of enclosed superstructure aft of amidships = Length of Ship
Sheer Correction = Difference $\times \left(75 - \frac{S}{2L}\right) = 4.111 \times .75 = 3.084$ on
If limited on account of midship superstructure = -
" to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. = -

TABULAR FREEBOARD corrected for flush deck if required = 10.5 + 1.575.

Correction for co-efficient = 12.08. DRAUGHTS AND SEASONAL CORRECTIONS

	+	-
Depth correction	5.28	-
Deduction for superstructures	-	-
Sheer correction	3.08	-
Round of Beam correction	-	.08
Correction for thickness of deck amidships	-	-
Other corrections, scantlings, etc.	5.64	-
	14.00	.08
		13.92
ALL SEASONS Summer Freeboard in inches	2' 2"	26.00
Additional allowance for superstructures on Timber carrying ships		=
Summer Timber Freeboard in inches		=

	Sailor, Tanker, Steamer	Timber
ALL SEASONS		
Depth to Freeboard Deck in feet	13.530	
Summer Freeboard in feet	2.167	
Moulded Draught (d)	11.363	(d1)
Addition for Keel	.583	
Extreme draught	11' 11 1/2"	11.946
Deduction for Tropical and addition for Winter freeboard d/4 =		ins.
Addition for Winter North Atlantic (if required)		ins.
Deduction for Tropical Timber Freeboard $\frac{d1}{4}$		ins.
Addition for Winter " " $\frac{d1}{3}$		ins.
" " N.A. Timber Freeboard (if required)		ins.

THE BRITISH CORPORATION REGISTER OF SHIPPING AND AIRCRAFT

"SIR BERNARD REILLY"

SURVEY FOR FREEBOARD CONDITIONS OF ASSIGNMENT

SHIPS NAME "Empire Katy" (Tug).

OFFICIAL NUMBER 180375.

Nationality and Port of Registry British, Gool.

PARTICULARS OF SUPERSTRUCTURES, TRUNKS, CASINGS, DECKHOUSES

	Coaming	Plating	Stiffeners	Spacing	End Attachments	No. and size of Openings	Height of Sills	Height of Casings
Poop Bulkhead								
R.Q.D. "								
Bridge Aft Bulkhead								
" Forward "								
Forecastle Bulkhead								
Trunk, Aft								
" Forward								
Exposed Machinery Casings on Freeboard or R.Q. Decks	22	28	3" x 2 1/2" x 25	32 1/2	-	2 @ 2'0" x 1'6"	24"	3'6"
Exposed Machinery Casings on superstructure decks								
Machinery Casings within Superstructures not fitted with Cl. 1 closing appliances								
Deckhouses on flush deck ships		25	3" x 2 1/2" x 25	24"		2 @ 4'9" x 27 1/2"	24"	7'0"

PARTICULARS OF CLOSING APPLIANCES (state if capable of being manipulated from both sides)

Poop Bulkhead	
R.Q.D. "	
Bridge Aft Bulkhead	
" Forward "	
Forecastle Bulkhead	
Exposed Machinery Casings on Freeboard or R.Q. decks	Hinged steel doors operated both sides.
Exposed Machinery Casings on superstructure decks	
Machinery Casings within superstructures not fitted with Cl. 1 Closing Appliances	
Deck houses on Flush Deck ships	Hinged steel doors operated both sides.

PARTICULARS OF FREEING ARRANGEMENTS

	Length of Bulwark	Height of Bulwark	No. and size of Freeing Ports each side	Area each side	Rule Area
After Well	F2A	3'-0"	5 @ 6'-0" x 9"	22 1/2 sq ft	21 sq ft
Forward Well		3'-0"	1 @ 6'-0" x 9"	4 1/2 sq ft	

State fore and aft position and height above deck to bottom of port, for each port

After Well

4" Sill

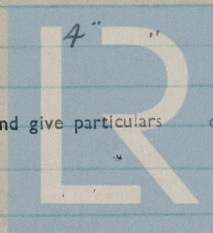
Forward Well

4" "

State whether freeing ports are fitted with shutters, bars or rails, and give particulars

Bar

Give particulars of freeing port area, etc., on superstructure decks



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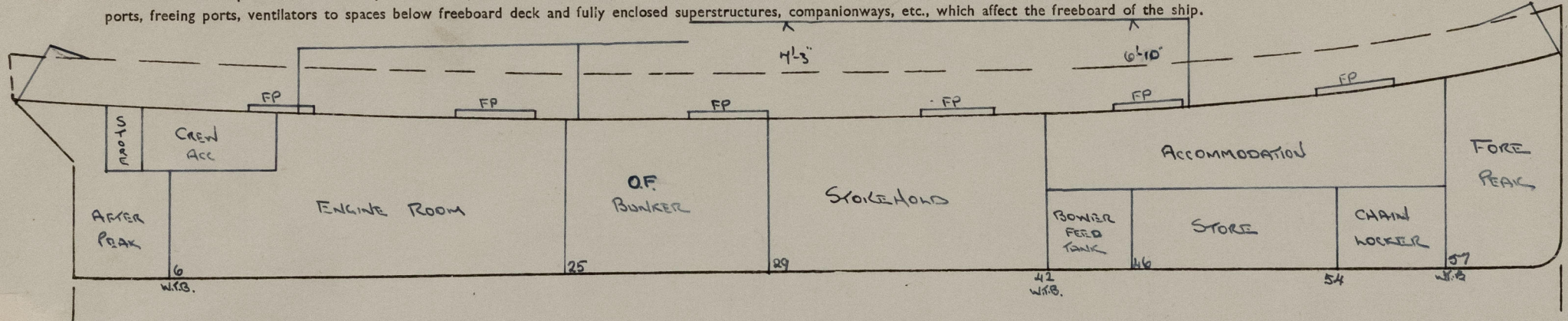
Lloyd's Register Foundation

As this vessel is less than 250'-0" in length
the Freeboard Report has not been compared with the
approved plans.

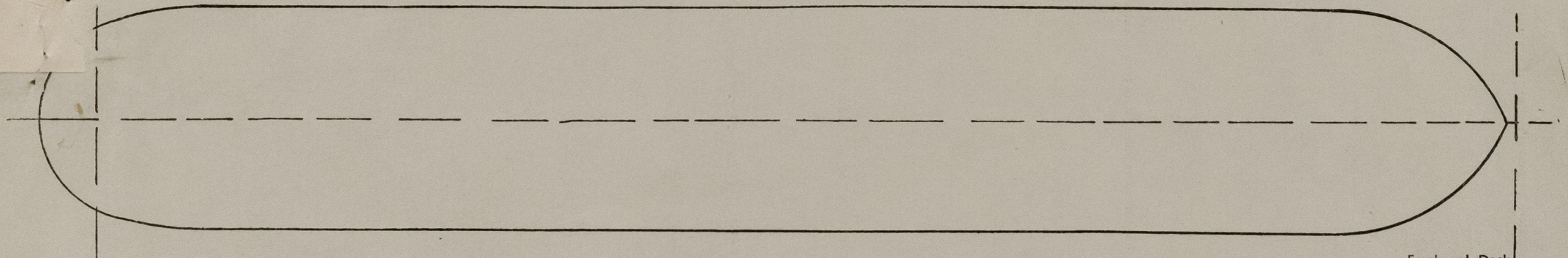
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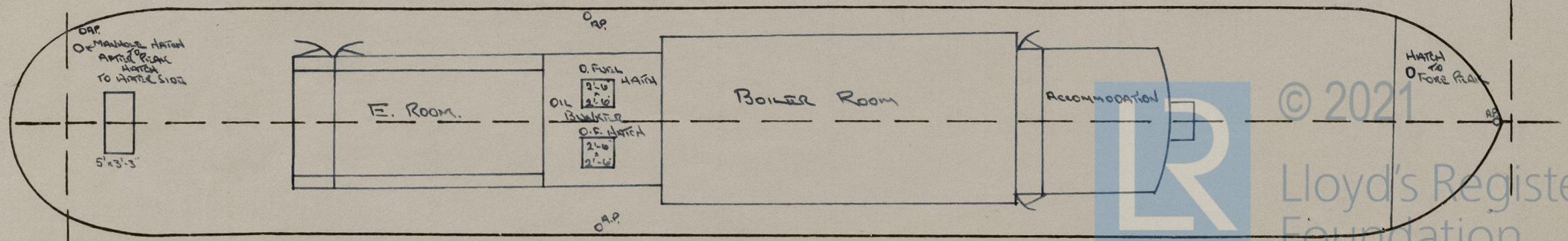
Position and dimensions of superstructure decks, position of superstructure bulkheads and openings, extent and thickness of wood sheathing in wells, position of cargo and coaling hatchways, gangway, cargo and coaling ports, freeing ports, ventilators to spaces below freeboard deck and fully enclosed superstructures, companionways, etc., which affect the freeboard of the ship.



Superstructure Deck



Freeboard Deck



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PARTICULARS OF ALL HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Number and description of Hatchway from forward		MANHOLE HATCH FORE TO PEAK.	BUNKER HATCHES PORT & STARBOARD.	HATCH TO AFTER STORE	MANHOLE HATCH TO AFTER PEAK.					
Dimensions of Hatchway		16 1/2" x 12 1/2"	2'-6" x 2'-6"	5'-0" x 3'-3"	17" x 12 1/2"					
COAMINGS	Height above { steel { deck { wood {	9"	7"	2'-0"	9"					
	Thickness { sides { ends	.34	.40	.34	.34					
	Stiffeners			2 1/2 x 1 1/4 COPE AROUND TOP OF HATCH						
	Brackets or Stays									
HATCH BEAMS	Number									
	Spacing									
	Scantling and Sketch									
	Bearing Surface and thickness of carriers or sockets									
FORE AND AFTERS	Number									
	Spacing									
	Unsupported lengths									
	Scantling and Sketch									
	Bearing Surface and thickness of carriers or sockets									
HATCH COVERS	Material	STEEL	STEEL	WOOD	STEEL					
	Thickness	3/8	.50	2 1/2" F&A.	3/8					
	How Fitted	BOLTED COVER	HINGED WITH BUTTERFLY BOLTS.	FITTED WITH LOCKING BAR	BOLTED COVER					
	Bearing Surface			3'						
	Spacing of Cleats			24'						
	Number of Tarpaulins			2						

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

yes

Are lashings provided in accordance with rule requirements?

yes

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

Are battens and wedges efficient and in good condition?

yes.



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Give full particulars of the following:—

Fiddle, Funnel and Vent Coamings, Engine Room skylight and other openings in Machinery Casing tops and their means of closing (state height of coamings, type of fiddle covers, and if these are permanently attached in their proper positions)

Fiddle	Storm covers.
21" Ventilators	Wood covers & 2 canvas covers.
Funnel	Cravate.

Flush Bunker Scuttles on freeboard and superstructure decks (state material, type of joints, etc., and if secured by hinge or permanent chain attachment)

1 Flush Bunker Scuttle - cast iron bayonet chain on starboard side.

Companionways on freeboard and superstructure decks (state material, height of doorway sills, type of doors, and if these can be closed and secured from both sides)

24" sills.
Steel hinged doors, operated both sides.

Ventilators in exposed positions on freeboard, raised quarter and superstructure decks to spaces below freeboard decks and fully enclosed superstructures enclosed by Class 1 appliances (state height of steel coamings, pitch of rivets in deck connection, type of closing arrangements)

2 Cowl Vents.	21" dia.	10'-0" coam.	riveted,	wood plugs + canvas covers	- To stokehold.
1 " "	7"	3'-0"	welded	" " " "	- accommodation.
2 " "	8"	3'-0"	"	" " " "	- Engine Room.
1 " "	5"	2'-6"	"	" " " "	- Chart Room.
1 " "	4"	1'-6"	"	" " " "	- Boatwain's Store.
1 Blackout Vent.	12"	4'-6"	Bolted	" " " "	- Accommodation.
1 " "	3'-6"	6"	welded	" " " "	- Engine Room.
1 Fan	9"	3'-6"	"	" " " "	- " "
1 M.V.	7"	6"	"	" " " "	- Accommodation.
1 G.N. P.S.	5	23"	Bolted	" " " "	- " "
1 G.N. P.S.	5	23"	"	" " " "	- Crew's accommodation.
1 G.N. P.S.	5	23"	"	" " " "	- Stokehold.
2 G.N. P.S.	5	23"	"	" " " "	- Engine Room.

Airpipes in exposed positions on freeboard, raised quarter and superstructure decks (state height to opening and if satisfactory closing arrangements are provided)

1-2" Air pipe	36" coaming with wood plugs + canvas covers	- Fore Peak.
2-1 1/2" " P.S.	36" " " " " " "	- Fresh Water Tank.
1-2" " " "	36" " " " " " "	- After Peak.
2-3" " " "	36" " " " " " "	- Oil Fuel Bunkers.
1-3" " " P.S.	36" " " " " " "	- Boiler Feed Tank.



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Scuppers and Sanitary Discharge Pipes (state material, type and number of valves)

Scuppers. 5 in No. 5" x 3 gunwale bar cut.

Sanitary Discharges. 2' - 4" w.c. gunmetal.
3 - 1 1/2" storm "

Side Scuttles to spaces below freeboard and superstructure decks (state type or pattern, and if permanent or portable deadlights are supplied)

None in shell below freeboard deck.
10" dia. x 8" dia. With cast iron deadlights.

Vertical distance of sill of lowest side scuttle below top of freeboard deck at side amidships

Guard Rails on freeboard and superstructure decks (state type and where fitted)

Boat Deck. Stanchions & Two Rails fitted around after end.

Gangways and Lifelines

Hand rail on casing sides.

Gangway, Cargo and Coaling Ports in sides of ship

SUPPLEMENTARY REQUIREMENTS FOR STEAMER CARRYING TIMBER DECK CARGOES

Do Superstructure and Machinery Casings comply with rules?

Is provision made for protection of steering gear?

Is emergency steering gear provided?

Are efficient sockets and eyes for lashings provided and properly spaced?

State particulars of longitudinal subdivision in double bottom

State particulars of Bulwarks and Rails

Particulars of any Special Features in the construction of the Ship

Endorsement at first survey and at surveys for Renewal of Certificate:—

The fittings and appliances are in accordance with the particulars shown in the form and are in good condition