

THE BRITISH CORPORATION REGISTER OF SHIPPING AND AIRCRAFT  
SURVEY FOR FREEBOARD

STEAMER, TANKER, SAILER: <sup>S.M.</sup> ~~"EMPIRE FASTNESS"~~ "FIRMITY" WITH  
WITHOUT TIMBER DECK CARGO

Nationality BRITISH Builders' Name and No. of Ship RICHARD DUNSTON LTD  
 Port of Registry HULL LONDON. HESSLE. Nº 456.  
 Official Number 180325 Owners MINISTRY OF WAR TRANSPORT  
 Gross Tonnage 111.05 (MGRS) HANNAN SAMUEL & CO LTD. FOWAY.  
 Date of Build DEC. 1944 Port and Date of survey HULL DURING CONSTRUCTION.  
 Name of Surveyor W. J. NOBLE.  
 Particulars of Classification BS\* (COASTING SERVICE) Names of Sister Ships "EMP. FABRIC" TYPE.  
 Type of Superstructures POOP & FORECASTLE  
 Trade of Ship  
 Service Endorsement if any

SUMMER FREEBOARD recommended amidships from centre of disc to top of deck line, (..... wood..... steel)		
TROPICAL FRESH WATER LINE above centre of disc	<u>2 1/2"</u>	Corresponding Freeboard <u>1-3 1/2"</u>
FRESH WATER LINE " " "	<u>2 1/2"</u>	" " <u>1-3 1/2"</u>
TROPICAL LINE " " "	<u>0</u>	" " <u>1-6"</u>
WINTER LINE below " "	<u>2 1/2"</u>	" " <u>1-8 1/2"</u>
WINTER NORTH ATLANTIC LINE " " "	<u>4 1/2"</u>	" " <u>1-10 1/2"</u>

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 20-11-44  
 DATE OF EXPIRY 19-11-49  
 ASSIGNED NOTES

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

*[Signature]*  
Chief Surveyor

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

on the 6TH DECEMBER, 1944



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*[Signature]*  
Secretary

## COMPUTATION OF FREEBOARD

Length on summer load line  $141'-0"$  Moulded Breadth  $27'-0"$  Moulded Depth  $11'-0"$  Depth of Keel  $1/2$  Tons

Moulded displacement (ex bossing) at moulded draught of 85 per cent. of moulded depth  $425$

Co-efficient of fineness for use with tables  $\frac{\Delta \times 35}{L \times B \times D \times 85} = .7130$

Displacement and tons per inch immersion in salt water at summer load line  $442 @ 4.95 \text{ T.P.I.}$

Moulded depth  $11.000$  Deduction for Fresh Water  $\frac{\Delta}{40 T} = 2.33$  inches

Stringer Plate  $3/8"$   $.031$  Round of Beam Correction

Sheathing on exposed deck T  $(\frac{L-S}{L})$   $-$  Ships Round of Beam  $0.00$  inches

Rise of floor (in sailers)  $-$  Standard Round of Beam  $\frac{B \times 12}{50} = 6.48$

Depth for Freeboard (D)  $11.031$  Difference  $6.48$

Table Depth  $4/15$   $9.400$  Restricted to

Depth Correction  $4/130$   $1.631$  Correction  $\frac{\text{Difference}}{4} \times (1 - \frac{S}{L}) = 162.2262$

If restricted by superstructures  $1.769 \text{ on}$

$3665 \text{ cu.}$

	Enclosed Length	Length of Overhang	Height	Mean Covered Length (S)	Height Correction	Effective Length (E)
Poop	$37'-0\frac{3}{4}"$	-	$7'-0"$	$41.26$	-	$41.26$
Raised Quarter Deck						
Bridge		F				
		A				
Forecastle	$13'-8\frac{1}{16}"$	$1'-10"$	$8'-0"$	$15.63$	-	$14.83$
Trunk Aft	$35'-1"$		$4'-0"$		$18/24$	$23.39$
" Forward	$27'-10"$		$3'-4"$	$18 \times 2.67$		$8.26$
Tonnage Opening Aft	$18'-10"$		$3'-4"$	$14.71 \times 2.67$		$4.56$
" " Forward				$27.6$		
Totals				$23.39$		
				$18.56$		
				$10.26$		
				$52.21$		
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## SURVEY FOR FREEBOARD

### CONDITIONS OF ASSIGNMENT

SHIPS NAME *EMPIRE FASTNESS.*

OFFICIAL NUMBER 180325

Nationality and Port of Registry *BRITISH, HULL.*

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	$\frac{5}{16}$ "	$5" \times \frac{5}{16}"$	2'-3"	WELDED.	2@10" DIA.	5'-1"	7'-0"
R.Q.D. "							
Bridge Aft Bulkhead							
" Forward "							
Forecastle Bulkhead	$\frac{5}{16}$ "	$3 \times 3 \times \frac{1}{2}"$	2'-0" x 2'-6"	WELDED	2@4'-1" x 1'-10"	1'-3"	8'-0"
Trunk, Aft	$\frac{5}{16}$ "	$3 \frac{1}{2} \times \frac{5}{16}"$	1'-10"	"			7'-0"
" Forward	$\frac{5}{16}$ "	$4" \times \frac{5}{16}"$	1'-8"	"			3'-4"
Exposed Machinery Casings on Freeboard or R.Q. Decks							
Exposed Machinery Casings on superstructure decks	$\frac{5}{16}$ "	$4" \times \frac{5}{16}"$	1'-9"	WELDED AT TOP BKTS. AT BOTTOM	(P)		8'-3" x 8'-5"
Machinery Casings within Superstructures not fitted with Cl. 1 closing appliances							
Deckhouses on flush deck ships							

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

Poop Bulkhead	
R.Q.D. "	
Bridge Aft Bulkhead	
" Forward "	
Forecastle Bulkhead	STEEL DOORS OPERATED BOTH SIDES.
Exposed Machinery Casings on Freeboard or R.Q. decks	
Exposed Machinery Casings on superstructure decks	on Poop (P)
Machinery Casings within superstructures not fitted with Cl. 1 Closing Appliances	
Deck houses on Flush Deck ships	

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					
Forward Well			SEE SKETCH.		

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

} After Well

} Forward Well

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

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



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PARTICULARS OF ALL HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Number and description of Hatchway from forward	UPPER DECK			POOP DECK	
	NO 1 HATCH	ESCAPE HATCHES	NO 2 HATCH	HATCH TO GALLEY BUNKER	HATCH TO AFTER STORE
Dimensions of Hatchway	14'-11 5/8" x 14'-8 3/4" 1'-2" ABOVE DK.	1'-8" x 1'-8" 1'-10" ABOVE DK.	26'-7 5/8" x 14'-8 3/4" 1'-10" ABOVE DK.	1'-8 1/2" x 1'-5 1/2"	2'-0" x 1'-10"
COAMINGS	Height } steel { deck above } wood {	10" COAMING	18" COAMING	10" COAMING	1'-4 1/2"
	Thickness { sides ends	1/2"	5/16"	1/2"	5/16"
Stiffeners					
Brackets or Stays					
HATCH BEAMS	Number	2		3	
	Spacing	6'-8"		6'-8"	
	Scantling and Sketch	2" x 3 3/4" FEMT 10" x 6" x 40 LBS. JOIST.		2" x 3 3/4" 10" x 6" x 40 LBS. JOIST.	
Bearing Surface and thickness of carriers or sockets	3"	1"	3"	1"	
FORE AND AFTERS	Number				
	Spacing				
	Unsupported lengths				
	Scantling and Sketch				
Bearing Surface and thickness of carriers or sockets					
HATCH COVERS	Material	WOOD	STEEL	WOOD	STEEL
	Thickness	2 3/8"	1/4"	2 7/8"	5/16"
	How Fitted	F & A.		F & A.	
	Bearing Surface	3"	1" PACKING	3"	1" PACKING
Spacing of Cleats	24"	2 DOGS	24"	WITH PADLOCK	2 LEACH SIDE.
Number of Tarpaulins	2		2		2

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

YES

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

NONE FITTED.

Are lashings provided in accordance with rule requirements?

YES.

Are battens and wedges efficient and in good condition?

YES.



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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



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