

Form LL. 4.C. Revised

THE BRITISH CORPORATION REGISTER OF SHIPPING AND AIRCRAFT

"FUTURITY" SURVEY FOR FREEBOARD

STEAMER, ~~TANKER~~, ^{S.M.} SAILED: "EMPIRE FANAL" ~~WITHOUT~~ ^{WITH} TIMBER DECK CARGO

Nationality BRITISH Builders' Name and No. of Ship RICHARD DUNSTON LTD

Port of Registry HULL Owners F.T. EVERARD & SONS LTD. HESSLE N° 455.

Official Number 180319 ~~MINISTRY OF WAR TRANSPORT. LONDON.~~

Gross Tonnage 411.05 ~~(MGRS) WM. ROBERTSON. GLASGOW.~~

Date of Build NOV. 1944 Port and Date of survey HULL DURING CONSTRUCTION.

Particulars of Classification B.S* (COASTING SERVICE) Name of Surveyor W.J. NOBLE

Type of Superstructures POOP AND FORECASTLE. Names of Sister Ships "FABRIC" TYPE.

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 9-11-44

DATE OF EXPIRY 8-11-49

ASSIGN. NOTE

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

[Signature]
Secretary

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COMPUTATION OF FREEBOARD

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

Moulded displacement (ex bossing) at moulded draught of 85 per cent. of moulded depth 725 Tons @ 9'-4 3/16"

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 742 TONS, 7.95 TONS @ 9'-6"

Moulded depth 11.000 Deduction for Fresh Water $\frac{\Delta}{40T} = 2.333$ inches

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

Sheathing on exposed deck T $(\frac{L-S}{L})$ - Ships Round of Beam 0.000 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 9.400 Restricted to

Depth Correction 1/150 x 1.631 Correction $\frac{\text{Difference}}{4} \times (1 - \frac{S}{L}) = 1.62 \times .2262 = .366504$

If restricted by superstructures 1.76904

	Enclosed Length	Length of Overhang	Height	Mean Covered Length (S)	Height Correction	Effective Length (E)
Poop	37'-6 3/4"		7'-0"	41.26		41.26
Raised Quarter Deck						
Bridge		F				
		A				
Forecastle	13'-8 1/16"	1'-10"	8'-0"	15.63		14.83
Trunk Aft	35'-1"		7'-0"		18/27	23.39
" Forward	27'-10"		3'-4"		$\frac{18 \times 2.67}{27 \times 6}$	8.26
Tonnage Opening Aft	18'-10"				$\frac{14 \times 1.2 \times 6.7}{27 \times 6}$	4.56
" " Forward						
Totals		S, 23.39 18.56 10.26 32.21		56.89		92.30

Standard Height of Superstructure 6'-0"

" " R.Q.D.

Percentage covered S/L = 40.34%

" " E/L = 65.46%

" " from Table line A, B, (corrected for absence of forecastle if required) 55.28%

Percentage from Table by interpolation for Bridge

less than .2L if required =

Deduction = 20.1 x 55.28 = 11.1106%

Percentage from Table for Tankers (or Timber ships) =

Deduction =

S, 52.21
109.10
S.L. = 77.38%

Station	Actual Sheer	Standard Sheer	Effective Sheer	S.M.
A.P.				1
1/8 L from A.P.				4
1/4 L from A.P.				2
Amidships				4
1/4 L from F.P.				2
1/8 L " "				4
F.P.				1
				18

Mean Actual sheer aft = LESS 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 X (.75 - $\frac{S}{2L}$) = 12.05 x .5483 = 6.607 in.

Effective Mean Sheer =
Standard " " .05L + 5 = 12.05
Difference = 12.05

If limited on account of midship superstructure =
" to maximum allowance of 1 1/2 ins. per 100 ft. =

TABULAR FREEBOARD corrected for flush deck if required = 14.33

Correction for co-efficient = $\frac{1393}{136} \times = 14.68$

	+	-
Depth correction	1.77	-
Deduction for superstructures	-	11.11
Sheer correction	6.61	-
Round of Beam correction	.37	-
Correction for thickness of deck amidships	-	-
Other corrections, scantlings, etc.	5.68	-
	14.43	11.11
		3.32

Summer Freeboard in inches 1'-6" = 18.00

Additional allowance for superstructures on

Timber carrying ships =

Summer Timber Freeboard in inches =

DRAUGHTS AND SEASONAL CORRECTIONS

	Sailer, Tanker, Steamer	Timber
Depth to Freeboard Deck in feet	11.031	
Summer Freeboard in feet	1.500	
Moulded Draught (d)	9'-6 3/8"	9.531 (d1)
Addition for Keel	1/2"	.042
Extreme draught	9'-6 7/8"	9.573
Deduction for Tropical and addition for Winter freeboard d/4		2 1/2 ins.
Addition for Winter North Atlantic (if required)		4 1/2 ins.
Deduction for Tropical Timber Freeboard d/4		- ins.
Addition for Winter " " d/4		- ins.
" " N.A. Timber Freeboard (if required)		- ins.

AGREED WITH I.M.B. THAT DRAUGHT (MID) SHOULD BE RESTRICTED TO 9'-6 3/8" IN SALT WATER.

**THE BRITISH CORPORATION REGISTER OF
SHIPPING AND AIRCRAFT**
SURVEY FOR FREEBOARD
CONDITIONS OF ASSIGNMENT

SHIPS NAME **"EMPIRE FANAL"** OFFICIAL NUMBER **180319.**
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		5/16" 1/4"	5" x 5/16"	2'-3"	WELDED	2 @ 10" DIA.	5'-1"	7'-0"
R.Q.D. "								
Bridge Aft Bulkhead								
" Forward "								
Forecastle Bulkhead		5/16"	3" x 3" x 1/4"	2'-0", 2'-6"	WELDED	2 @ 4'-1" x 1'-10"	1'-3"	8'-0"
Trunk, Aft	5/16"	5/16"	3 1/2" x 5/16"	1'-10"	-	-	-	7'-0"
" Forward		5/16"	4" x 5/16"	1'-8"	-	-	-	3'-4"
Exposed Machinery Casings on } Freeboard or R.Q. Decks }								
Exposed Machinery Casings on } superstructure decks }	5/16"	1/4"	4" x 5/16"	1'-9"	WELDED AT TOP SKT. AT BTM.	-	-	8'-3" 8'-5"
Machinery Casings within Super- structures 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	NONE
R.Q.D. "	-
Bridge Aft Bulkhead	-
" Forward "	-
Forecastle Bulkhead	HINGED STEEL DOORS - OPERATED BOTH SIDES.
Exposed Machinery Casings on } Freeboard or R.Q. decks }	
Exposed Machinery Casings on } superstructure decks }	
Machinery Casings within super- structures not fitted with Cl. 1 Closing Appliances }	
Deck houses on Flush Deck ships	

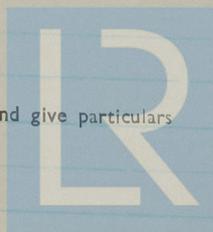
PARTICULARS OF FREEING ARRANGEMENTS

	Length of Bulwark	Height of Bulwark	No. and size of Freeing Ports each side	Area each side	Rule Area
After Well		SEE SKETCH			
Forward Well					

State fore and aft position and height above }
deck to bottom of port, for each port }
After Well
Forward Well

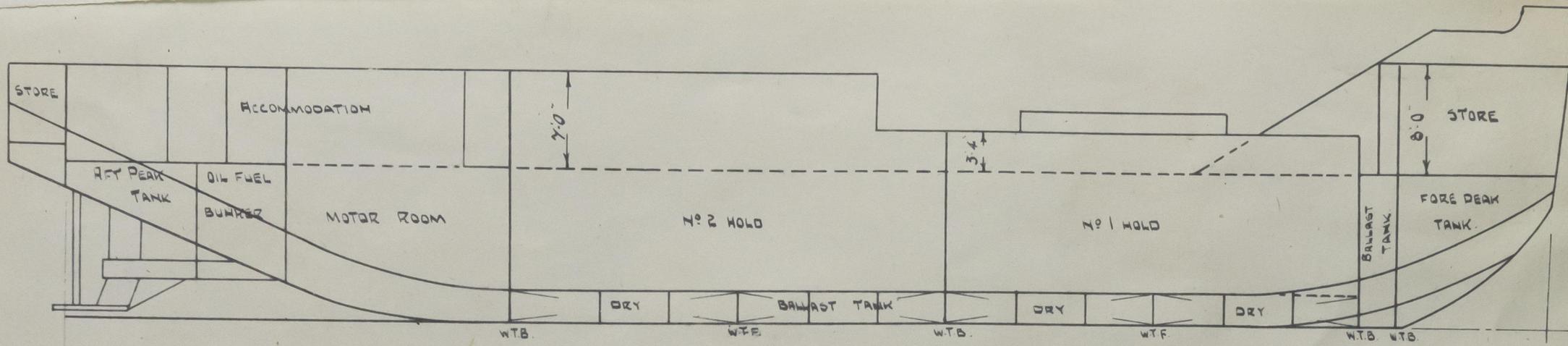
State whether freeing ports are fitted with shutters, bars or rails, and give particulars

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



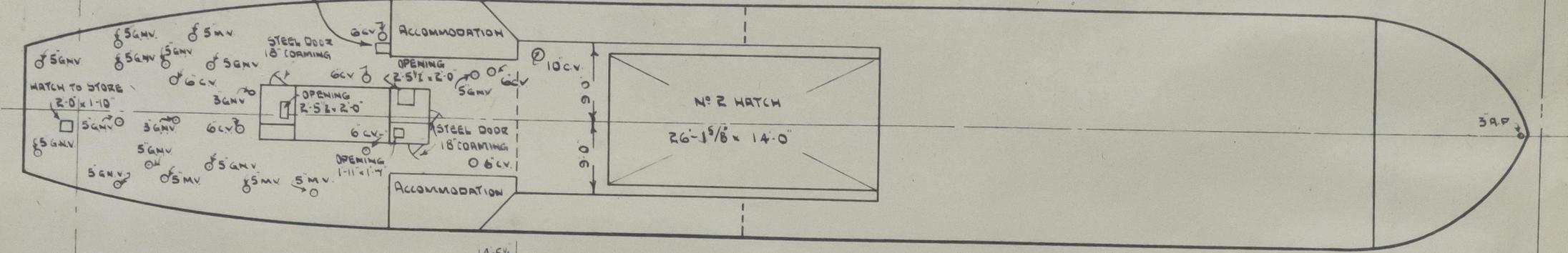
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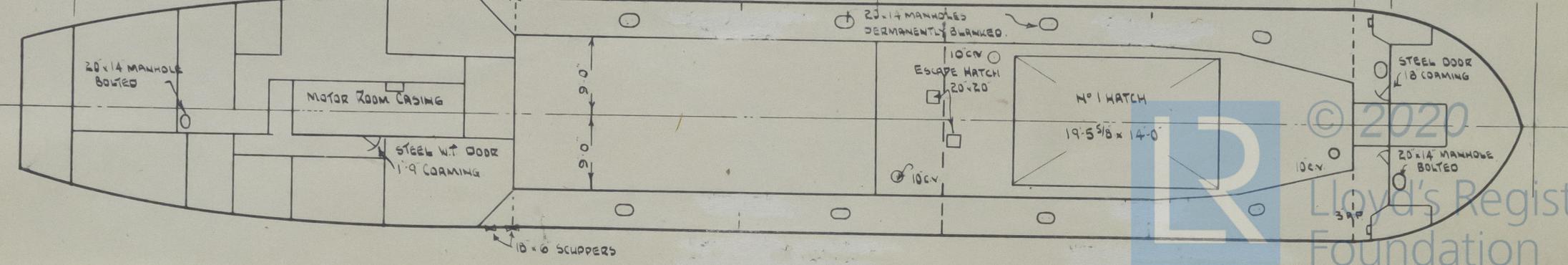


HATCH TO COAL BUNKER 1'-8 1/2" x 1'-5 1/2"
HOLE IN DECK 18" x 14"

SUPERSTRUCTURE DECK



42'-0" 4'-5 1/4" 35'-1" 46'-8" 3'-6" FREEBOARD DECK 13'-9"



PARTICULARS OF ALL HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Number and description of Hatchway from forward	UPPER DECK		POOP DECK		HATCH TO GALLEY BUNKER	HATCH TO 1&2 BUOYANCY SPACES	HATCH TO 3&4 BUOYANCY SPACES	
	NO. 1. HATCH.	NO. 1 & 2 HOLD ESCAPE HATCHES.	NO. 2. HATCH.	AFTER STORE.	1'-8 1/2" x 1'-5 1/2"	4'-0" 2'-8" AT TOP 2'-0" JK.	4'-0" 2'-8" AT TOP 2'-0" JK.	
Dimensions of Hatchway	19'-11 5/8" x 14'-8 3/4"	1'-8" x 1'-8"	26'-7 5/8" x 14'-8 3/4"	2'-0" x 1'-10"	1'-8 1/2" x 1'-5 1/2"	4'-0" 2'-8" AT TOP 2'-0" JK.	4'-0" 2'-8" AT TOP 2'-0" JK.	
COAMINGS	Height above steel deck	4'-2" ABOVE DK. 10" COAMING.	4'-10" ABOVE DK. 18" COAMING.	4'-10" ABOVE DK. 10" COAMING.	1'-6"	1'-4 1/2"	3'-6"	7'-2"
	Thickness	1/2"	5/16"	1/2"	5/16"	5/16"	5/16"	5/16"
Stiffeners								
Brackets or Stays								
HATCH BEAMS	Number	2.	3.					
	Spacing	6'-8"	6'-8"					
Scantling and Sketch	2 x 3/8 FLAT.	2 x 3/8 FLAT.	2 x 3/8 FLAT.					
	10 x 6 x 4 1/2 JOIST.	10 x 6 x 4 1/2 JOIST.	10 x 6 x 4 1/2 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					NOT FITTED	NOT FITTED		
HATCH COVERS	Material	WOOD.	STEEL.	WOOD.	STEEL.	STEEL.	STEEL.	
	Thickness	2 7/8"	1/4"	2 7/8"	2 5/8"	5/16"	5/16"	
	How Fitted	F & A.		F & A.	F & A.			
	Bearing Surface	3"	1" PACKING	3"	2"	1" PACKING.	1" PACKING.	1" PACKING.
	Spacing of Cleats	24"	2 JOGS.	24"	2 EACH SIDE.	WITH PADLOCK.	6 JOGS.	6 JOGS.
Number of Tarpaulins	2.		2	2	NONE.	& WING NUTS.	& WING NUTS.	

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

YES.

Are lashings provided in accordance with rule requirements?

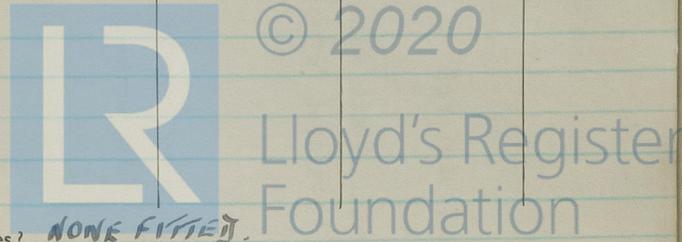
YES.

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

NONE FITTED.

Are battens and wedges efficient and in good condition?

YES.



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

PORT	1-2"	G.M. SCREW DOWN STRAIGHT THRO' TYPE DISCHARGE VALVE WITH EXTENDED SPINDLE TO UPPER DECK	} BELOW FREEBOARD DECK
STAR.	2-2"	VALVES SPINDLES :	
STB	2-4"	VALVE	} ABOVE FREEBOARD DECK
PORT	1-2	" " " " " " " "	

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

NONE

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)

3" X 2 1/2" X 30° ANGLE STANCHIONS WITH 3 SOLID RAILS FITTED ON POOP & UPPER DECKS AND ON AFT END OF FORECASTLE DECK. LOWER RAILS 1/8" DIA. SPACED 13" APART. UPPER RAIL 1" DIA.

Gangways and Lifelines

COLLAPSIBLE STANCHIONS WITH 1 1/2" G.F.S.W.R. AROUND CARGO HATCHES.
1 1/2" G.F.S.W.R. LIFELINE FROM FORE-END OF POOP STAR. DECKHOUSE TO AFT END OF MIDSHIP GUN PEDestal AND FROM FORE-END OF MIDSHIP GUN PEDestal TO FORECASTLE FRONT.

Gangway, Cargo and Coaling Ports in sides of ship



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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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