

RECEIVED

16 SEP 1943

IN D.O.

## STEEL STEAMER OR MOTORSHIP.

16 SEP 1943

Received at London Office

State if Report has been sent on the Freeboard of the Vessel YesState if Report is sent on the Machinery of the Vessel YesDate of completion of report 16 SEP 1943 Port of West Hartlepool No. 18461Survey held at West Hartlepool Date First Survey November 16<sup>th</sup> 1942 Last Survey September 4<sup>th</sup> 1943On the (State if Machinery fitted Y and N if Single, Twin or Triple Screw) 18461 "EMPIRE RIVAL" (machinery amidships)State Type (Full Scantling, Complete Superstructure with or without Tonnage Openings) Complete superstructure without tonnage openings State Type of Erections ForeTONNAGE under Tonnage Deck 6571.98Do. of space or spaces between Tonnage Dk. and Upper Dk. ✓

Total

Gross Tonnage 7044.81Register Tonnage 4844.82

## REGISTERED DIMENSIONS.

FEET

Length 431.5Breadth 56.2Depth 35.2CLASS 100 A.1. State if with freeboard as condition of Class YesLength from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a) 425'-0"Breadth (greatest moulded) B 56'-0"Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c) D 37'-8"1st Longitudinal Number (L x D) 151942nd Numeral L x (B + D) 38,994Framing Depth "d" at middle of length. See Sec. 3 (1d) 23.3Proportions—Depth to Length—Uppermost continuous deck to top of keel 11.27Do. Long Bridge to top of keel ✓Draught Moulded 26'-7½"Built at West HartlepoolLaunched 19-6-43 Yard No. 1151Builders Wm Gray & Co LtdOwners Ministry of War TransportManagers R. Chapman & Sons  
(Where necessary to be entered in Reg. Book)

Residence

Port of Registry West Hartlepool

If surveyed while building, afloat, or in dry dock

Building, afloat & in dry dock

## FRAMES, DOUBLE BOTTOM AND BEAMS.

	INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.		INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.
FRAMES, Spacing amidships.....	31	✓	Bracket Floors, Frame .....	✓	
"    "    from ½ length amidships to Collision bulkhead.....	27	✓	"    "    Reversed Frame.....	✓	
"    "    in peaks .....	24	✓	"    "    Vertical Struts .....	✓	
SIDE FRAMING.	12 3½ 9/16 B.A (ends)	✓	Centre Girder, depth and thickness amidships	43¼ 54	✓
Frame Amidships, Angle, [ or ]	12 x 3½ x 3½ x 32 9/16	✓	"    "    top Angles .....	3½ 3½ 48	✓
"    "    Extends up to.....	Upper & 2nd decks alt.	✓	"    "    bottom Angles.....	4 4 54	✓
Reversed Frame Amidships, Angle	✓	✓	"    "    Side Girders, No. each side and thickness	1 6 x 3½ x 42	✓
"    "    Extends up to .....	✓	✓	Margin Plate depth (excl. of flange) and thickness	3 36 54	✓
Depth of Framing Girder.....	12	✓	"    "    Vertical Angle to Tank side Bracket abaft ½ len. from stem	6 6 44	✓
Frames in Uppermost Continuous 'tween Decks, Angle, [ or ]	12 x 3½ x 3½ x 32 9/16	✓	"    "    Vertical Angle to Tank side Bracket from forward ½ len. from stem to Panting Area	6 6 44	✓
"    "    Second 'tween Decks, Angle, [ or ]	✓	✓	"    "    Gussets, spacing and scantling abaft ½ len. from stem.....	Continuous 42	✓
"    "    Third	✓	✓	"    "    Gussets, spacing and scantling from forward ½ len. from stem to Panting Area .....	Continuous 42	✓
"    "    from ½ len. for'd. to 15% len. from Stem	12 3½ 9/16	✓	"    "    Tank Side Brackets, height above base line at toe of Frame and thickness	94 44	✓
"    "    in Peaks, Angle [	8 3½ 35	✓	INNER BOTTOM PLATING.		
Diameter and Spacing of Rivets through Frame and Shell Plating amidships	7/8 3½ 27 on bottom 3½ 27 65 on side	✓	Breadth and thickness of Middle Line Strake...	7¾ 52	✓
State if Frame Joggled.....	Yes	✓	Thickness of remainder in Holds .....	under hatches 52	✓
Are the scantlings and arrangements in the Panting Area in accordance with the Rules and/or as approved?	Yes	✓	Are Rule requirements complied with regarding increases of scantlings in way of double bottom in E. & B. space and framing in Bunkers and Boiler Room?.....	Yes	✓
Are the scantlings and arrangements in way of the Bottom Forward in accordance with the Rules and/or as approved?	Yes	✓	BEAMS.		
SINGLE BOTTOM.			Uppermost Continuous Deck, amidships in way of Bridge, Angle, [ or ]	8 3½ 20	✓
Floors, Depth and thickness at mid-line in Holds.....			"    "    Spacing.....	31	✓
Height of Brackets at side above base line at toe of frame.....			Second Deck, amidships, Angle, [ or ]	9 3½ 38	✓
Middle Line Keelson, on Floors, Angles, [ or ]			"    "    Spacing .....	✓	
"    "    Through Plate or Inter-costal Plate .....			Third Deck, amidships, Angle, [ or ]	✓	
"    "    Foundation Plate on Floors .....			"    "    Spacing .....	✓	
"    "    Flat Plate Keel Angles			Fourth Deck, amidships, Angle, [ or ]	✓	
Side Keelsons, No. each side.....			"    "    Spacing.....	✓	
"    "    thickness of Intercoastal Plate...			Poop Deck, Angle, [ or ]	✓	
"    "    Angles .....			"    "    Spacing .....	✓	
DOUBLE BOTTOM.			Bridge Deck, Angle, [ or ]	✓	
Solid Floors, thickness and spacing	Even 42	✓	"    "    Spacing .....	9 3½ 42	✓
"    "    Are Frame and Reversed Frame joggled?	Yes	✓	Forecastle Deck, Angle, [ or ]	6 3 44	✓
Bracket Floors, breadth and thickness at middle line .....	✓	✓	"    "    Spacing .....	27 24	✓
"    "    breadth and thickness at margin plate.....	✓	✓			

(MADE IN ENGLAND.)

010328-010337-0029½



# PILLARS AND DECKS.

		INCHES IN SHIP.		Any Departure from Approved Plans to be Noted.				INCHES IN SHIP.		Any Departure from Approved Plans to be Noted.	
PILLARS, No. of Rows						Stringer Plate, breadth and thickness in way of Bridge					
" in 'tween Decks, Size and Spacing						Thickness of Plating abreast Deck openings in way of Wells					
" " " "						Thickness of Plating abreast Deck openings in way of Bridge					
" in Holds						Thickness of Plating within line of openings					
Centre Line Bulkhead, Stiffeners and Spacing						If Sheathed, material and thickness					
Plating, thickness of						Third Deck, Stringer Plate, breadth and thickness					
STRINGERS AND DECKS.						If Plated, state thickness					
Uppermost Continuous Deck.						Fourth Deck, Stringer Plate, breadth and thickness					
Stringer Plate, breadth and thickness in Wells						If Plated, state thickness					
" " " " in way of Bridge						Poop Deck, Stringer Plate, breadth and thickness					
" Angle in Wells						Plating, Sheathing, material and thickness					
Thickness of Plating abreast Deck openings in way of Wells						Bridge Deck, Stringer Plate, breadth and thickness					
Thickness of Plating abreast Deck openings in way of Bridge						Plating, Sheathing, material and thickness					
Thickness of Plating within line of openings						Forecastle Deck, Stringer Plate, breadth and thickness					
If Sheathed, material and thickness						Plating, Sheathing, material and thickness					
Second Deck, Stringer Plate, breadth and thickness in Wells											

## SHELL PLATING.

SCANTLINGS.										RIVETING.									
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED,	EDGES.				BUTTS.									
	AMIDSHIPS.		FORWARD.	AFT.		State if jogged? No	SINGLE OR DOUBLE.		RIVETS.		No. OF ROWS OF RIVETS.	RIVETS.		STRAPPED OR LAPPED.					
	Breadth.	Thickness.	Thickness.	Thickness.			Diam. Inches.	Spacing cr. to cr. Inches.	Diam. Inches.	Spacing cr. to cr. Inches.									
												Inches.	Inches.		Inches.	Inches.			
Flat Plate Keel.....	54	80	70	70		Double	7/8	3 1/2	Three	7/8	4	Double rtd straps & welded butts alternately							
„ Dblg. (if any)																			
Bottom Plating, No. of Strakes	4	65	50	50		Double	7/8	3 1/2	Four	7/8	3 1/2	lapped							
Bilge Plating, No. of Strakes	E	64	50	50		"	7/8	3 1/2	"	7/8	3 1/2	inside straps							
Side Plating, No. of Strakes	3	60	45	45		"	7/8	3 1/2	Three	7/8	3 5/32	lapped							
Upper Deck, Sheer- strake in Wells	7 1/2	73	46	46		"	7/8	3 1/2	Four	1	4	lapped							
Upper Deck, Sheer- strake in Bridge																			
Strake below Sheer- strake in Wells		65	46	46		Double	7/8	3 1/2	Three	7/8	3 5/32	lapped							
Strake below Sheer- strake in Bridge																			
Poop Side Plating																			
Bridge Side Plating																			
Forecastle Side Plating			40			Single	3/4	3	One	3/4	2 5/8	lapped							
WATERTIGHT BULKHEADS																			

## WATERTIGHT BULKHEADS.

Total No. of W.T. BULKHEADS in Vessel - *collision bhd. to weather deck, 6 watertight bhd's to 2nd dh & 6*  
 Extending to Upper Deck (Sec. 3 c) *divisional W.T. bhd's in tween decks*  
 " Deck next below *see page 4 of this report*  
 As per Rule *7*

## FORGINGS AND CASTINGS.

	Casting or Forging.	Scantlings.	Maker's Name.	Any Departure from Approved Plans to be Noted.
KEEL, Bar				
STEM				
STERN FRAME				
Speed of Vessel				
RUDDER—Type				
" A x D.				
" Diam. of head				
" Mainpiece at top pintle				
" " heel				
" how constructed				
" double or single plate coupling, vertical or horizontal				

## STIFFENERS.

	Plating Thickness.	VERTICAL.				HORIZONTAL.	
		Scantlings.	Spacing.	Scantlings.	Spacing.	Scantlings.	Spacing.
MIDSHIP BULKH'D, Upper 'tween decks	26	5 x 3 x 42A	30				
" " Second							
" " Third							
" " Holds	39	12 x 3 1/2 x 30A	30				
COLLISION " (in Hold)	53	10 x 3 1/2 x 30A	24				
AFTER PEAK "	48	6 x 3 1/2 x 30A	24				

## STEEL.

Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture) *Open Hearth*  
*Sorman Long & Co. Ltd., South Durham Steel & Iron Co. Ltd., Skinningrove Iron Co. Ltd., Corsett Co. Ltd., American Steel.*  
 Has the Steel been tested as required by the Rules? *Yes.*







GENERAL REMARKS—(The Surveyor should state the Number of Report and Name of any Sister Vessel. Plans showing Vessel as built should be forwarded and a List of the Plans should be embodied.)

Forging reports are enclosed. This vessel is of the fabricated "B" type design similar to the "Empire Peak" (Wm Gray & Co's No 1148) & previous vessels.

Pre-fabricated material was supplied as follows:-  
Keel & Centre Girder, Tank top & Tunnel by Fairfield Shipbuilding & Eng. Co. Ltd  
Floors by Wm Baird & Son Ltd. Engine & Boiler casing, Saloon & Bridge Houses, Boat deck & side houses by John Birch & Son Ltd. Hatch coverings by Lambhill Iron Works Ltd.  
Interstals under machinery by Horseley Bridge & Thos. Piggott Ltd. Water tanks Deck plating, & Hatch webs by G & W Walker Ltd. Cabin stores & coal & escape hatches by Hubert Owen & Co. Ltd. Strong beams, side webs, stringer angles, Deck beams, Pocket bunkers & Bulkheads by Palmers Hebburn Co. Ltd.  
Tank margins & brackets and side frames by Cleveland Bridge & Eng. Co. Ltd. Shell plating & Deck Girders by Motherwell Bridge & Eng. Co. Ltd.  
Bulk angle interstals by Brownlie & Murray Ltd.

Closing of openings in divisional watertight bulkheads in tween decks:-  
The access & tonnage openings in bulkheads 133, 109, 57 & 34 are closed by riveted watertight steel plates. The openings in bulkheads 14 & 87 are closed by hinged watertight steel doors operated from both sides.

PARTICULARS OF ELECTRIC WELDING (if employed) Alternate keel & centre girder butts welded by fabricators. Bilge keel welded to shell. Bulkhead stiffener brackets welded to tank top. Chock plates between frames amidships welded to 2<sup>nd</sup> deck stringer. Tunnel butts & stiffeners welded. Gusset plates amidships welded to tank margins. Stemframe & Rudder of fabricated welded construction by Bolville Construction Co. All welding carried out with approved electrodes.

SPECIAL NOTATIONS: Either as part of the vessel's class or for record in the Register Book. Cruiser stem. Lloyd's A&C.P. Two decks. D.F. Cargo bottoms not fitted. Notation about equipment. E.S.D. with freeboard. Collision bulkhead to weather deck. 6 bulkheads to 2<sup>nd</sup> deck. 6 divisional watertight bulkheads in tween decks.

Particulars of Drop Test of Cast Steel Anchors, viz.:- Weight, Surveyor's Initials, Number of Certificate, Date of Test.	Weight incl. pins	Surveyor	No. of cert	Date of test
1st Bower	44-1-7	J.H.J.	5467	5-3-43
2nd "	44-0-7	J.H.J.	5481	12-3-43
STREAM	19-1-22	J.H.J.	5497	15-3-43

PARTICULARS FOR RECORD in the REGISTER BOOK. Length of Poop ☒ ft., R.Q.D. ☒ ft., Bridge ☒ ft., Forecastle ☒ ft. (in feet and tenths). When the Poop or Forecastle are joined to the B.D., this should be distinctly stated.  
Official No. 168961. Signal Letters ☒ Extreme Breadth over Belting (Circ. 1611) ☒ Over-all Length 446-4 (Circ. 1703)  
No. and Material of Decks Two decks steel.  
Parts of Bottom of Vessel coated with cement or approved composition. Fore & aft peaks & double bottom under boilers. cemented. Remainder of tanks. cemented over rivet heads only.  
Particulars of composition (if fitted) and of approval ☒

PARTICULARS OF WATER BALLAST: (Comprising all tanks which may be used for Water Ballast. (Circ. 1284) Wells are not to be included in the lengths of the tanks, but Cofferdams and Dry Tanks (if tested) are to be included.)

Where Fitted	Length	Water Capacity	Where Fitted	Length	Water Capacity
No 7, d. b. tank only (No 8 & 16 tank as included in deep tank aft).	Feet.	Tons		Feet.	Tons
Double bottom, aft	62.0	226	Fore peak tank,	21.50	119
Double bottom, under Engines and Boilers,	46.5	217	After peak tank,	20.00	123
Double bottom, if under Engines only,	<input checked="" type="checkbox"/>		Deep tank, aft,	49.08	345
Double bottom, if under Boilers only,	<input checked="" type="checkbox"/>		Deep tank, forward,	14.00	248
Double bottom, forward,	209.7	821	Other tanks, if fitted, Wing tanks in mach space	23.25	398
Total length (if continuous) and Capacity	318.2	1264	(If necessary furnish further information by sketch.)		1233

Order for Special Survey No. 2147  
Date 21/12/43  
Dates of Surveys held while building  
1942. Nov. 16. 17. 30 Dec. 8. 10. 31. 1943. Jan. 4. 6. 8. 18. 19. 20. 22. 25. Feb. 8. 9. 10. 22. 24. Mar. 1. 3. 4. 8. 17. 25. 26. April. 6. 8. 9. 12. 13. 16. 22. 29. May. 4. 7. 13. 14. 17. 18. 19. 20. 31. 32. 25. 26. 27. 28. June. 1. 2. 4. 7. 8. 10. 15. 17. 18. 19. July. 2. 14. 19. 20. 21. 22. 26. Aug. 9. 11. 13. 18. 19. 31. 23. 25. 27. 28. 30. 31. Sept. 1. 2. 3. 4.  
Total No. of Visits 81