

STEEL STEAMER OR MOTORSHIP

Received at London Office.

State if Report has been sent on the Freeboard of the Vessel *Yes*State if Report is sent on the Machinery of the Vessel *Yes*

Date of completion of report

30 JUN 1943

Port of

LIVERPOOL

No.

119669

Survey held at

Northwich

Date First Survey

23rd September/42

Last Survey

3rd June

1943

On the

(State if Machinery fitted Aft and if Single, Twin or Triple Screw)

Water Carrier

S.S. "EMPIRE BILLOW"

Single Screw

Machinery fitted Aft

State Type

(Full Scantling, Complete Superstructure with or without Tonnage Openings)

Raised Quarter Deck

State Type of Erections

✓

TONNAGE under Tonnage Deck ...

154.84

Do. of space or spaces between Tonnage Dk. and Upper Dk.

CLASS

+100 A.I.

State if with freeboard as condition of Class

✓

Built at

Northwich

Total

Gross Tonnage

214.56

Register Tonnage

74.39

Length from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a)

FEET

92.62

Breadth (greatest moulded)

B 23.0

Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c)

D 10.33

1st Longitudinal Number (L x D)

955

2nd Numeral L x (B + D)

3082

Framing Depth "d," at middle of length. See Sec. 3 (1d)

9.2

Proportions—Depth to Length—Uppermost continuous deck to top of keel

1/8.9

Do. Long Bridge to top of keel

✓

Draught Moulded

9' 10"

Launched March 24th 1943. Yard No. 718

Builders Messrs W.J. Yarwood & Son (1938) Ltd.

Owners Ministry of War Transport

Managers Messrs T. Phelan & Co.

(Where necessary to be entered in Reg. Book)

Residence

Port of Registry

Liverpool

If surveyed while building, afloat, or in dry dock

While building

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.....	21	✓	Bracket Floors, Frame		
" " from $\frac{3}{8}$ length amidships to Collision bulkhead.....	21	✓	" " Reversed Frame.....		
" " in peaks	21	✓	" " Vertical Struts		
SIDE FRAMING.			Centre Girder, depth and thickness amidships		
Frame Amidships, Angle, $\frac{1}{2}$ or $\frac{3}{4}$	3 32	✓	" " top Angles		
" " Extends up to..... (Single Deck)	3 32	✓	" " bottom Angles.....		
Reversed Frame Amidships, Angle $\frac{1}{2}$ or $\frac{3}{4}$	2 1/2 28	✓	Side Girders, No. each side and thickness.....		
" " Extends up to..... across floor tops			Margin Plate depth (excl. of flange) and thickness		
Depth of Framing Girder..... at side ends. 5 & 4			" " Vertical Angle to Tank side Bracket abaft $\frac{1}{4}$ len. from stem		
Frames in Uppermost Continuous 'tween Decks, Angle, $\frac{1}{2}$ or $\frac{3}{4}$			" " Vertical Angle to Tank side Bracket from forward $\frac{1}{4}$ len. from stem to Panting Area		
" " Second 'tween Decks, Angle, $\frac{1}{2}$ or $\frac{3}{4}$			" " Gussets, spacing and scantling abaft $\frac{1}{4}$ len. from stem.....		
" " Third			" " Gussets, spacing and scantling from forward $\frac{1}{4}$ len. from stem to Panting Area		
" " from $\frac{1}{2}$ len. for'd. to 15% len. from Stem	4 3 30	✓	Tank Side Brackets, height above base line at toe of Frame and thickness		
" " in Peaks, Angle $\frac{1}{2}$ or $\frac{3}{4}$	4 3 30	✓	INNER BOTTOM PLATING.		
Diameter and Spacing of Rivets through Frame and Shell Plating amidships	5/8 - 3/2	✓	Breadth and thickness of Middle Line Strake.....		
State if Frame Joggled.....	no	✓	Thickness of remainder in Holds		
Are the scantlings and arrangements in the Panting Area in accordance with the Rules and/or as approved?	as app'd.	✓	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?.....		
Are the scantlings and arrangements in way of the Bottom Forward in accordance with the Rules and/or as approved?	as app'd.	✓	BEAMS.		
SINGLE BOTTOM.			Uppermost Continuous Deck, amidships	4 3 34	✓
Floors, Depth and thickness at mid-line in Hold.....	28 x 13 1/2	✓	" " R.Q.D.K. in way of Bridge, Angle, $\frac{1}{2}$ or $\frac{3}{4}$	4 3 30	✓
Height of Brackets at side above base line at toe of frame.....	none	✓	" " Spacing	4 3 30	✓
Middle Line Keelson, on Floors.....	8 3 5 1/2	✓	Second Deck, amidships, Angle, $\frac{1}{2}$ or $\frac{3}{4}$		
" " Through Plate or Inter-costal Plate	5/8 in Pl. Km. Through	✓	" " Spacing		
" " Foundation Plate on Floors	1/2 in Ballast tank Inter-costal	✓	Third Deck, amidships, Angle, $\frac{1}{2}$ or $\frac{3}{4}$		
" " Flat Plate Keel Angle.....	3 3 30 (to 1/2 Bulk in cargo tanks).	✓	" " Spacing.....		
Side Keelsons, No. each side.....	one (2 for'd.)	✓	Fourth Deck, amidships, Angle, $\frac{1}{2}$ or $\frac{3}{4}$		
" " thickness of Inter-costal Plate.....	1/2 in cargo tanks	✓	" " Spacing.....		
" " Angles	6 x 3 x 32 in tanks	✓	Poop Deck, Angle, $\frac{1}{2}$ or $\frac{3}{4}$		
DOUBLE BOTTOM.			" " Spacing.....		
Solid Floors, thickness and spacing	6 x 3 x 38 in Pl. Km.	✓	Bridge Deck, Angle, $\frac{1}{2}$ or $\frac{3}{4}$		
Are Frame and Reversed Frame joggled?			" " Spacing.....		
Bracket Floors, breadth and thickness at middle line			Forecastle Deck, Angle, $\frac{1}{2}$ or $\frac{3}{4}$	4 3 30	✓
" " breadth and thickness at margin plate.....			" " Spacing.....	21	✓

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		One each side of Bulkhead.		in Cargo tanks							
" in 'tween Decks, Size and Spacing											
" " " " "											
Cargo tanks in Hold		Angles 4 1/2 4 1/2 3/8		quarter pillars							
" " " " "		5'00 apart									
Centre Line Bulkhead.											
Stiffeners and Spacing		21"		6 3 30							
Plating, thickness of				.30 - .26							
STRINGERS AND DECKS.											
Uppermost Continuous Deck.											
Stringer Plate, breadth and thickness in Wells		50 x .5 - .30									
" " " " " in way of Bridge		60-54 x .5 - .30									
" " " " " Angle in Wells		3 3 30									
Thickness of Plating abreast Deck openings in way of Wells				.30							
Thickness of Plating abreast Deck openings in way of Bridge				.30							
Thickness of Plating within line of openings											
If Sheathed, material and thickness											
Second Deck.											
Stringer Plate, breadth and thickness in Wells											
Stringer Plate, breadth and thickness in way of Bridge											
Thickness of Plating abreast Deck openings in way of Wells				.30							
Thickness of Plating abreast Deck openings in way of Bridge				.30							
Thickness of Plating within line of openings											
If Sheathed, material and thickness											
Third Deck.											
Stringer Plate, breadth and thickness											
If Plated, state thickness											
Fourth Deck.											
Stringer Plate, breadth and thickness											
If Plated, state thickness											
Bridge Deck.											
Stringer Plate, breadth and thickness											
Plating, Sheathing, material and thickness											
Forecastle Deck.											
Stringer Plate, breadth and thickness											
Plating, Sheathing, material and thickness											

SHELL PLATING.

SCANTLINGS.					RIVETING.							
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES.			BUTTS.			
	AMIDSHIPS.		FORWARD.	AFT.		State if joggled?	RIVETS.		No. of Rows of Rivets.	RIVETS.		STRAPPED OR LAPPED.
	Breadth.	Thickness.	Thickness.	Thickness.			SINGLE OR DOUBLE.	Diam.		Spacing cr. to cr.	Diam.	
Flat Plate Keel.....	36	.40	.36	.36		Double	3/4	2 5/8	Treble	3/4	2 5/8	Lapped.
" Dblg. (if any)	✓											
Bottom Plating, No. of Strakes	48	.32	.35	.30		Single	5/8	2 1/2	Double	5/8	2 1/4	Lapped
Bilge Plating, No. of Strakes	55	.32	.28	.32		as above			"	"	"	"
Side Plating, No. of Strakes	49	.32	.28	.28		"	"	"	"	"	"	"
Upper Deck, Sheer-strake in Wells	58	.36	.28	.28		"	"	"	"	"	"	"
Upper Deck, Sheer-strake in Bridge	✓											
Strake below Sheer-strake	57	.50				Single	5/8	2 1/2	Double	5/8	2 1/4	Lapped
Strake below Sheer-strake in Bridge	✓											
Deep Side Plating	33	.32	-	.28		Single	5/8	2 1/2	Double	5/8	2 1/4	Lapped
Bridge Side Plating	✓											
Forecastle Side Plating	58	.25	-	-		Single	5/8	2 1/2	Double	5/8	2 1/4	Lapped

WATERTIGHT BULKHEADS.

Total No. of W.T. BULKHEADS in Vessel—		Five			
Extending to Upper Deck (Sec. 3 c)		✓			
" Deck next below		✓			
As per Rule		3.			
MIDSHIP BULKH'D, Upper 'tween Decks	Plating Thickness.	STIFFENERS.			
		VERTICAL.		HORIZONTAL.	
		Scantlings.	Spacing.	Scantlings.	Spacing.
" " Second					
" " Third					
" " Holds (at Brk.)	.32-.30	6x3x44BA.	27	AND AS	✓
" " (in Hold)	.32-.30	5x3x34BA.	24	AND AS	✓
" " AFTER PEAK	.32-.30	6x3x38BA.	24		✓

FORGINGS AND CASTINGS.

	Casting or Forging.	Scantlings.	Maker's Name.	Any Departure from Approved Plans to be Noted.
KEEL, Bar	✓			
STEM	M/S. Rolled bar.	5 1/2 x 1		
STERN	Propeller Post	F.I.	5 3/4 x 3	
FRAME	Rudder	F.I.	5 1/2 x 3	
Speed of Vessel			Under 10 Knots	
RUDDER—Type				
A x D				
Diam. of head	F.I.	4 3/4		
Mainpiece at top pintle	"	4 3/4		
heel	"	3 3/4		
how constructed	As per drawing			
double or single plate coupling, vertical or horizontal	Single			

STEEL.

Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture)	Open Hearth
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.)

This is the first vessel of this design.
The following approved plans are returned:—
Sections, Scantling plan,
Shell plating, Engine seats,
Stem frame and rudder.

The forging certificate for stem frame and rudder are also returned.
It should be noted that the stem frame and rudder were made for
Yard No 287 (Hess-Parsons) but were not used on that vessel. The
forging certificate referred to above is a copy of the certificate issued
in Sunderland dated 12.5.20. The stem frame and rudder frame
were carefully examined, found in satisfactory condition and re-issued
with the certificate.

PARTICULARS OF ELECTRIC WELDING (if employed)

The peak and fwd. ballast tank tops, floors to centre keelson, Bracket lugs
to & bulkhead. Side keelson wash plates, hatch coamings, fittings etc.
welded. "Murex" approved electrodes and procedures used, the
workmanship has been carefully examined and found satisfactory.

SPECIAL NOTATIONS:—Either as part of the vessel's class or for record in the Register Book.

"Water Carrier"

Particulars of Drop Test of
Cast Steel Anchors, viz.:
Weight, Surveyor's Initials,
Number of Certificate, Date
of Test.

1st Bower
2nd
3rd

3 curbs
3 "

0 qms
0 "

84
17

A.E.G.
A.E.G.

2459
2458

28.5.42
28.5.42

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop ft., R.Q.D. 30' 8 1/2" ft., Bridge ft., Forecastle 13' 6" ft.

(in feet and tenths). When the Poop or Forecastle are joined to the B.D., this should be distinctly stated

Official No. 168859

Signal Letters

Extreme Breadth over Belting
(Circ. 1611)

23' 5"

Over-all Length
(Circ. 1703)

100' - 4 1/2"

No. and Material of Decks One (R.Q.D.) steel.

Parts of Bottom of Vessel coated with cement or approved composition

Bottom of Vessel to inner turn of bilge cemented, floors
cement washed, all cargo and ballast tanks cement washed also boiler feed tanks, Coal Bunkers Britumastic
enamelled.

Particulars of composition (if fitted) and of approval "Wales Bone" approved composition.

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. Feet.	Water Capacity. Tons.	Where Fitted.	Length. Feet.	Water Capacity. Tons.
Double bottom, aft,			Fore peak tank,	12.8	26
Double bottom, under Engines and Boilers,			After peak tank,	12.46	20
Double bottom, if under Engines only,			Deep tank, aft,		
Double bottom, if under Boilers only,			Deep tank forward,	8.75	20
Double bottom, forward,			Other tanks, if fitted, (R.Q.D. 15) Nos 21-25	3.5	9 TOTAL
Total length (if continuous) and Capacity			(If necessary furnish further information by sketch.)		

Order for Special Survey No. 1349

Date 19/6/42

Dates of Surveys
held while building

1942 Sept 23, Oct 8, 15, 22, Nov 10, 17, Dec 1, 3, 8, 15, 19, 22, 29, 31, 1943 Jan 22, 25, 28, Feb 2, 4, 9, 12, 17, 24, 26,
Mar 2, 5, 10, 24, 28, May 4, 6, 13, 19, 25, 27, June 1, 3.

Total No. of Visits 38