

With or Without Disconnected Erections.

FERRO-CONCRETE VESSEL.

TYPE *Cargo Steamer.*

(Received at London Office)

THU. 20 FEB. 1919

State if Report is also sent on the Machinery of the Vessel *Yes*

Date of completion of report

19th February 1919.

Port of *Barnsby-in-Furness.*

No. *1768.*

Survey held at

Barnsby

Date, First Survey

6th February 1918

Last Survey

7th February 1919

On the

Steamer

Armistice

Rig

Schooner

TONNAGE under

790.05

CLASS *A.1. for English Channel & Coasting*

Master

J. S. Bowen

Do. between Tonnage Dk.

and 4th Dk.

Year of appointment

*(1) As Master in Service of owner of present vessel 1917
(2) As Master of this vessel 1919*

Tonnage under Upper Dk. *790.05*

service Sharnes to Milford Haven.

Built at

Barnsby-in-Furness.

Do. of Poop

54.40

"Subject to annual survey." Experimental.

When built

1919 Launched 7th Jan 1919

Do. of R.Q. Dk.

18.99

Type of Construction *Hennebique System.*

By whom built

The Ferro-concrete Ship

Do. of Bridge House

7.31

Breadth (outside of slabs) *32.0*

Owners:-

Construction Co. Ltd.

Do. of Forecastle

23.70

*Depth at middle of length from underside of bottom slab at keel to top of upper deck slab at side ... *19.58*

Managers

Leopold Walford (London) Ltd.

Do. of Houses on Dk.

894.46

Length on deck from fore part of stem to after part of stern post ... *205.0*

Residence

29. 3rd St. Helens, London.

Do. above Crown of Engine Room ...

43.88

Proportions—Depths (*) to Length—Upper Deck *10.46*

Port belonging to

London

Gross Tonnage

894.46

Destined Voyage *London via Londonderry.*

Surveyed while Building, Afloat, or in Dry Dock

Special Survey.

Do. above Crown of Engine Room ...

850.57

Register Tonnage as cut on Beam ... *536.49*

No. of laid Decks

One

Do. above Crown of Engine Room ...

286.22

LENGTH on Deck as per Rule ... *205 0*

Feet. Inches.

16 7 1/2

Do. above Crown of Engine Room ...

28.86

BREADTH—Feet. Inches. *32 0*

Feet. Inches.

19 7 1/2

Do. above Crown of Engine Room ...

28.86

DEPTH, ACTUAL—Top of Floors to top of Upper Dk. Beam

Do. do. do. do. do. Second Dk. Beam

19 7 1/2

Do. above Crown of Engine Room ...

28.86

Dimensions from Ship's Register, Length *205.0* breadth *32.0* depth *19.58* Moulded depth, ft. *19* ins. *7 1/2*

To Upper Dk.*

Round of Upper Dk. Beam, Actual

Do. above Crown of Engine Room ...

28.86

In Ship. Concrete. Reinforcement

Concrete. Reinforcement

Concrete. Reinforcement

Do. above Crown of Engine Room ...

28.86

FRAMES at Sides, Amidships

Links

12" x 5" 3 = 1 3/8

Do. above Crown of Engine Room ...

28.86

Spacing

36"

36"

Do. above Crown of Engine Room ...

28.86

CENTRE LINE KEELSON

Links

28 3/4 x 6 4 = 1 1/2 2 = 5/8

Do. above Crown of Engine Room ...

28.86

SIDE KEELSONS

Links

12" x 3 2 = 1 1/2 1 = 5/8

Do. above Crown of Engine Room ...

28.86

Spacing

4' 11" x 4' 9 1/2

4' 11" x 4' 9 1/2

Do. above Crown of Engine Room ...

28.86

No. Each Side

Two

Two

Do. above Crown of Engine Room ...

28.86

BILGE KEELSON

Links

12" x 3 2 = 1 1/2 1 = 5/8

Do. above Crown of Engine Room ...

28.86

SIDE STRINGERS

Links

6" x 3 1 = 1 1/2 1 = 3/4

Do. above Crown of Engine Room ...

28.86

Spacing

4' 0 1/2

4' 0 1/2

Do. above Crown of Engine Room ...

28.86

No. Each Side

Three

Three

Do. above Crown of Engine Room ...

28.86

BILGE CHINE

Links

19 1/2 x 19 1/2 11 = 1 1/2 2 = 1 3/8

Do. above Crown of Engine Room ...

28.86

UPPER CHINE

Links

27 1/2 x 24 1/2 19 = 1 1/2 2 = 1 3/8

Do. above Crown of Engine Room ...

28.86

SIDE GIRDERS & Margin

No. Each Side including Margin

2 = 1 3/8 6 = 1

Do. above Crown of Engine Room ...

28.86

Do. above Crown of Engine Room ...

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MASTS, SPARS, &c.

EQUIPMENT No. 10908				LETTER m.				ANCHORS.				Secretary's Letter 30 th Octo ^r 1918. See Remarks.				
Number of Certificate.	Anchors	WEIGHT, EX STOCK			WEIGHT OF STOCK			TEST, PER CERTIFICATE.			WEIGHT REQUIRED BY TABLE 31.			Description of Anchor.	Makers.	Where and when tested and Superintendent.
		Owts.	qrs.	lbs.	Owts.	qrs.	lbs.	Tons.	owts.	qrs.	lbs.	Owts.	qrs.			
27916	1st Bower ...	26	0	0	Stops	25	12	2	0	23	1	0	Green's Quick Green	J. Green.	T. P. H. C. H. 20-2-18	
27917	2nd " ...	25	0	18	D°	24	17	0	21	23	1	0	D°	D°	D° 3 C. H. 20-2-18	
27918	3rd " ...	22	0	22	D°	22	11	1	0	20	1	0	D°	D°	D° 25-2-18. D°	
	4th " ...															
	Collective weight.	73	1	12						66	3	0				
28213	Stream	6	2	14	1 3 0	8	17	2	0	6	0	0	Common	D°	D° 27-3-18. D°	
28214	Kadron	3	1	20	- 3 1/4	5	16	2	7	3	0	0	D°	D°	D° D°	

Particulars of Drop Test of Cast Steel Anchors, viz. :— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	1st Bowler	2nd "	3rd "	4th "
	14- 3- 6. <i>D.D. Williamson.</i>	14- 2- 26. <i>D.</i>	12- 3- 8. <i>C. S. Perkins.</i>	<i>No 1159.</i>
				<i>23-1-18.</i>
				<i>- 1136.</i>
				<i>16-1-18.</i>
				<i>- 547.</i>
				<i>31-1-18.</i>

CHAIN CABLES.												HAWSEYS AND WARPS.							
Number of Certificate.		Length and size supplied.		Test per Certificate.		WEIGHT OF CHAIN CABLE.		Length and size per Table S1.		Description.	Makers of Cables.	Where and when tested, and Superintendent.	Material.	Length and size supplied.		Breaking Test of Steel Wire Towing.	Length and size per Table S1.		
		Length.	Diam.	Stations.	Break.	Supplied.	Per Rule.	Length.	Diam.					Length.	Cir.		Length.	Cir.	
		Fathoms.	Inch.	Tons.	Tons.	Cwts. qrs. lbs.	Cwts. qrs. lbs.	Fathoms.	Inch.					Fathoms.	Cir.	Tons.	Fathoms.	Cir.	
		✓												TOWLINE. 23 1/2	90	3 1/2	22	90	3 1/2
25287		180	1 1/2	40 1/2	58 1/2	210-0-20	190-2-14 1/2	180	1 1/2	Steel Link	J. Green.	Is. R.H.C.H. 16-6-18 S.C. Paul		HAWSEYS & WARPS Manila	90	6		90	6
Jesse Brown Chain Steel Wire		75	Cir. 3 1/2	26	-	-	-	60	3 1/2						90	5		90	5
Steel wires certified by Totten Refractory Co. S.																			

Boats *Two Lifeboats 20'0"* Steering Gear, Steam *of Rogers & Co* Steering Gear, Hand *Sprare tiller & relieving tackles.*
Pumps, Number *One ordinary downcomer & hand pump* Diameter of Barrel *4" & 4 1/2"* State whether they are in efficient working order *Yes.*
Windlass is *Hanfield & Co* Capstan *Three steam winches.*
Engine Room Skylights.—How constructed? *Steel plates & angles* What arrangements for deadlights in bad weather? *Steel flaps & bulls'eyes.*
Coal Bunker Openings.—How constructed? *Cast Iron* How are lids secured? *Bayonet joints* Height above deck? *Flush.*
Number of Scuppers, and numbers and dimensions of Freeing Ports, &c. *None.*
Celling in Holds, thickness and material *Pine 2 1/2"* Cargo Battens, thickness and material *None.*
Cargo Hatchways.—How formed? *Reinforced-concrete* Hatches, If strong and efficient? *Pine 2 1/2"*
State size No. 1 Hatch (Forward) *23'-4" x 16'-0"* No. 2 Hatch *26'-4" x 16'-0"* No. 3 Hatch *26'-4" x 16'-0"* No. 4 Hatch
Number of Web Plates, Shifting Beams and Fore and Afters to each Hatch *Two webs & three wooden fore & afters in each hatch.*

Bulwarks, height above deck and description *Open s/banchions & rails (wire)* Main Rail, material and size

The foregoing is a correct description
FOR THE FERRO CONCRETE SHIP CONSTRUCTION CO. LTD.

Builder's Signature (here only) *Attiley* manager

Surveyor's Signature *Thomas S. Skuse* *T. S. Skuse*
Surveyor to Lloyd's Register of Shipping.

Concrete.—Materials used: Aggregate, Size and Particulars $\frac{3}{8}$ " $\frac{7}{8}$ " Eskhmeal Granite $\frac{3}{8}$ " Shetfield Granite Rose-washed pit sand
Portland Cement Brand G & T Earle — Pelican Brand

Proportions— Aggregate 4.0 C.ft. Sand 2.0 C.ft. Cement 1.66 C.ft.
Test Results of Concrete actually used in Vessel—Average crushing at seven days 1640 lbs. per sq. inch. Size of Cubes 4"
 Ditto twenty-eight days 2670 Ditto Ditto
 " Fifty by seven days. 3831"
Percolation at 5/8 Granite 4 days on a slab size 9' x 2'. Water penetration 3 slabs :- 1 1/2, 1 1/2, 1 1/2"
 5/8 " " 5 " on finished ship 3/16, 3/16, 3/16"
 5/8 " " 5 " " " 1/8, 1/8, 1/8"

Correspondence.—State dates and initials of letters respecting this case (Reference should be made in any correspondence concerning this case to the file number of this report.)

E. Mar. 19th. M. Mar. 19th. 20th April 20th. 25th. May 4th. 7th. June 13th. 27th. Octo. 28th. 30th. Nov. 5th. 15th. 25th. 28th. Dec. 3rd. 10th. 11th. 12th. 17th.

Dec. 20th. 31st. 1919. M. Jan. 7th. 9th. 16th. 20th. Feb. 3rd. 11th. 17th.

Have all the upper and weather decks been tested as required by the Rules for Steel Ships (Sec. 26, par. 20)? *yes* State results of tests *Satisfactory.*

Have all the girtways been tested as required by the Rules for Steel Ships (Sec. 26, par. 20)? *yes.* State results of tests *Satisfactory.*

This vessel has been constructed in accordance with the approved plans

The Secretary's letters as indicated above & in other respects as required by the Society for this type of vessel. The material & workmanship are good. The Freeboard assigned in the Secretary's Letter dated 17th January 1919 has

been duly marked & verified on the vessels side. Barrow Report No. 174.
This vessel was launched on 7th January 1919, from that time to her completion
when she left Barrow on 7th February for London dry to load a cargo of oats for

London, there was no leakage.
The breakage was taken at the launch & was found to be practically nil.
The Surveyor should state the Number of Report and Name of any Sister Vessel. None.
Plans to be forwarded with F.E. Report showing vessel as built.
The approved plans (27 in number) are enclosed.
Fees applied for.

The amount of Entry Fee $\times 3$ £ 9 : 0 : 0 19
Special Survey Fee $\times 3$ £ 127 : 13 : 0 Received by me, *2.4.19 G.R.B.N.*
Travelling Expenses, if any £ : :
State whether the Vessel has been built under Special Survey *Yes. 3.4.19.*

Certificate to be sent to *Barrrow* Date of issue *4.4.19.*

I am of opinion this Vessel should be Classed **A.1. "For English Channel & Coasting Service" Thames to Milford Haven*
 With or without Freeboard, as condition of Class *Subject to annual Survey & experiment to*
without Cargo Ballast. Lloyds A. & C.P.

Thomas S. Shute,
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Character assigned

at
for English Channel & Harwich Service
from Thame to Milford Haven + Lmb. 2.19

Experimental
Cargo basket not filed

Lloyd's Re
Foundatio

GENERAL REMARKS

With regard to the equipment of the vessel, which was approved in the Secretary's Letter to the builders dated 30th Octo^r 1918, the requirements of Table 31 of the Rules, as recorded on page of this report, are in accordance with the grade corresponding with the equipment of the vessel.

The after peak has not been tested as a water ballast tank & a non-return valve has been fitted to the suction.

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 31.0 ft., R.C.D. ft., Bridge ft., Forecastle 22.75 (in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated.

No. and Material of Decks and No. of tiers of Beams (this information is to be given as it should appear in the Register Book)

12th (Reinforced Concrete) 1 Tier of Beams.

Official No. 142777 : Signal Letters ✓

State if Machinery is fitted aft Yes.

If bottom of Vessel has been coated with any waterproofing material, paint, or other composition, give particulars One coat "L" Solution + 2 coats of asphaltum. (J. Dampney & Co) Card 18

PARATICULARS OF WATER BALLAST.—State whether the Double bottom is constructed on the cellular system. No double bottom.

Where Fitted.	*Length. Feet.	Water Capacity. Tons.	Where Fitted.	*Length. Feet.	Water Ca Ton
Double bottom, aft,			Fore peak tank,		23
Double bottom, under Engines and Boilers,			After peak tank,		
Double bottom, if under Engines only,			Deep tank, aft,		
Double bottom, if under Boilers only,			Deep tank, forward,		
Double bottom, forward,			Other tanks, if fitted,		
Total capacity of double bottom			(If necessary, furnish further information by sketch.)		

* The wells are not to be included in the lengths of the tanks.

State whether the above have been tested as required by the Rules Yes

Order for Special Survey No. ✓

authorized
Date 2nd Feb^r 1918

No. 99 in builder's yard.

DATES OF SURVEYS held while building

1918. Feb. 6. 11. 12. 14. 19. 22. 25. 26. Mar. 1. 6. 8. 14. 20. April 18. 24. 29. May 1. 29. 31. June 6. 7. 11. 13. 17. 19. 25. July 2. 11. 12. 18. 19. 20. 22. 23. 24. 25. 26. 27. 29. 30. 31. Aug 1. 2. 7. 8. 9. 10. 14. 15. 16. 17. 19. 20. 21. 22. 23. 24. 26. 27. 28. 29. 30. 31. Sep^r 2. 3. 4. 5. 6. 7. 9. 11. 12. 13. 14. 16. 17. 18. 19. 22. 24. 25. 26. 27. 28. 30. Oct^r 1. 2. 3. 4. 5. 7. 8. 9. 10. 11. 12. 14. 15. 16. 17. 19. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. Nov 1. 2. 4. 5. 6. 7. 8. 9. 11. 13. 14. 15. 16. 18. 19. 20. 21. 22. 23. 25. 26. 27. 28. 29. 30. Dec 2. 3. 11. Total No. of Visits 1
5. 6. 7. 9. 10. 11. 12. 13. 14. 16. 17. 18. 19. 20. 21. 24. 30. 31. Jan 2. 3. 6. 7. 13. 14. 16. 21. 24. 27. 28. 30. 31. Feb. 3. 4. 5. 7.

Surveyor's Signature Thomas S. Shute

W. C. Hale