

# REPORT ON MACHINERY.

Received at London Office

WED. 14. JUN. 1916

Date of writing Report 30 May 1916 when handed in at Local Office 30 May 1916 Port of Boston

No. in Survey held at Quincy, Mass. Date, First Survey 30 Aug 1915 Last Survey 27 May 1916

Reg. Book. on the s/s CUBADIST

Master J. Van Gilder Built at Quincy, Mass. By whom built Fore River S. B. Corporation When built 1916

Engines made at Quincy, Mass. By whom made Fore River S. B. Corporation when made 1916

Boilers made at Buffalo, N. Y. By whom made Lake Erie Boiler Works when made 1916

Registered Horse Power Owners Cuba Distilling Co. Port belonging to New York

Nom. Horse Power as per Section 28 488 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

**ENGINES, &c.**—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 25" - 41" - 68" Length of Stroke 48" Revs. per minute 75 Dia. of Screw shaft as per rule 14.1/4" Material of screw shaft steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight in the propeller boss yes If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5'-0"

Dia. of Tunnel shaft as per rule 12.92 Dia. of Crank shaft journals as per rule 13.56 Dia. of Crank pin 14" Size of Crank webs 26" x 9 1/2" Dia. of thrust shaft under collars 14 1/16" Dia. of screw 17'-6" Pitch of Screw 16'-3" No. of Blades 4 State whether moveable yes Total surface 121 1/2 sq ft

No. of Feed pumps 2 independent Diameter of ditto 10 x 7" Stroke 24" 1-2" injectors Can one be overhauled while the other is at work yes

No. of Bilge pumps 3 independent Diameter of ditto 9 x 5 1/4 x 10" Bilge Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 as above + 3 Sizes of Pumps 10 x 12 and 12 Condenser No. and size of Suctions connected to bilge and Donkey pumps In Engine Room 5-3 1/2 In Holds, &c. Coal Bunker 2-3 1/2 In Holds

oil cargo pumping system

No. of Bilge Injections 1 sizes 10" Connected to bilge or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 4"

Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible none

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both valves & cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line below

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

What pipes are carried through the bunkers Coal bunker suction & Deck steam pipes How are they protected Wooden & iron casings

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes

Dates of examination of completion of fitting of Sea Connections 4 Apr 1916 of Stern Tube 6 Apr 1916 Screw shaft and Propeller 7 April 1916

Is the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door worked from

**BOILERS, &c.**—(Letter for record) Manufacturers of Steel As per Cleveland report No 57 herewith

Total Heating Surface of Boilers 7407 Is Forced Draft fitted yes No. and Description of Boilers 3 Single Ended

Working Pressure 190 lbs Tested by hydraulic pressure to 285 lbs Date of test 18/10/15 No. of Certificate 48

Can each boiler be worked separately yes Area of fire grate in each boiler 55 sq ft No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 9.30" Pressure to which they are adjusted 190 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork abt 1'-0" Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings bottom

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space: Material Thickness Pitch of stays How stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and thickness of girder at centre Length per rule Distance apart Number and pitch of stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

AS PER CLEVELAND REPORT HEREWITH (N. 57)

VERTICAL DONKEY BOILER— Manufacturers of Steel

no donkey boiler

| No.                                  | Description  | When made                 | Where fixed                         |
|--------------------------------------|--|---------------------------|-------------------------------------|
| Made at                              | By whom made   |                           |                                     |
| Working pressure                     | tested by hydraulic pressure to                        | Date of test              | No. of Certificate                  |
| Valves                               | No. of Safety Valves                                   | Area of each              | Pressure to which they are adjusted |
| If fitted with easing gear           | If steam from main boilers can enter the donkey boiler |                           | Date of adjustment                  |
| Material of shell plates             | Thickness  | Range of tensile strength | Descrip. of riveting long. seams    |
| Dia. of rivet holes                  | Whether punched or drilled                             | Pitch of rivets           | Lap of plating                      |
| Working pressure of shell by rules   | Thickness of shell crown plates                        | Radius of do.             | No. of stays to do.                 |
| Diameter of furnace Top              | Bottom   | Length of furnace         | Thickness of furnace plates         |
| Working pressure of furnace by rules | Thickness of furnace crown plates                      | Radius of do.             | Stayed by                           |
| Diameter of uptake                   | Thickness of uptake plates                             | Thickness of water tubes  | Dates of survey                     |

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts, 2 connecting rod bottom end bolts & nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set feed & bilge pump valves, spare piston rings, assorted bolts, nuts & iron. Section of crank shaft, propeller shaft, 4 propeller blades, 1 pair crank pin brasses, 1 pair crosshead brasses, 1 pair link brasses, 1 eccentric strap complete, air pump rod & bucket, 1 ahead eccentric rod, 1 set of check valves, cylinder cover bolts, junk ring bolts, valve chest cover bolts, boiler tubes & condenser tubes.

The foregoing is a correct description,  
FORE RIVER SHIP-BUILDING CORP.

By: *[Signature]* Manufacturer.

|                                |                                  |   |
|--------------------------------|----------------------------------|---|
| Dates of Survey while building | During progress of work in shops | 1915 Aug 30 Oct 16 Nov 6, 8, 11, 17, 23, 29, Dec 2, 9, 15, 16, 22, 23, 30 1916 Jan 6, 7, 10, 11, 22, 25 Feb 3, 10, 15, 24, 29 |
|                                | During erection on board vessel  | Mar 1, 11, 16, 18, 20, 22, 29, 31 Apr 1, 5  |
|                                | Total No. of visits              | 55  |

|   |         |                                |  |                            |          |                             |         |             |         |
|---|---------|--------------------------------|--|----------------------------|----------|-----------------------------|---------|-------------|---------|
| Dates of Examination of principal parts—Cylinders | 11/3/16 | Slides                         | 18/4/16  | Covers                     | 18/4/16  | Pistons                     | 18/4/16 | Rods        | 18/4/16 |
| Connecting rods                                   | 31/3/16 | Crank shaft                    | 29/3/16  | Thrust shaft               | 29/3/16  | Tunnel shafts               | ✓       | Screw shaft | 5/4/16  |
| Stern tube  | 31/3/16 | Steam pipes tested             | 13/5/16  | Engine and boiler seatings | 4/4/16   | Engines holding down bolts  | 12/5/16 |             |         |
| Completion of pumping arrangements                | 12/5/16 | Boilers fixed                  | 12/5/16  | Engines tried under steam  | 26/5/16  |                             |         |             |         |
| Main boiler safety valves adjusted                | 23/5/16 | Thickness of adjusting washers | Port 1 1/2" AFT 1 1/4" Centre 1 3/8" Starboard 1 5/16" |                            |          |                             |         |             |         |
| Material of Crank shaft                           | Steel   | Identification Mark on Do.     | 118  | Material of Thrust shaft   | Steel    | Identification Mark on Do.  | 118     |             |         |
| Material of Tunnel shafts                         | ✓       | Identification Marks on Do.    | ✓  | Material of Screw shafts   | Steel    | Identification Marks on Do. | 118     |             |         |
| Material of Steam Pipes                           | Steel   | Lap welded                     | ✓  | Test pressure              | 570 lbs. | ✓                           |         |             |         |

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery & boilers of this vessel have been built & fitted on board under Special Survey in accordance with the Rules & approved plans & the workmanship & material are good throughout. They have been satisfactorily tried under steam & the machinery & boilers, in my opinion, are eligible to receive the notation + LMC 5.16 + FD in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 5.16. F.D.

*[Signature]*  
15/6/16.

|                              |            |                   |  |
|------------------------------|------------|-------------------|--|
| The amount of Entry Fee      | £ \$ 15.00 | When applied for, |  |
| Special                      | £ 148.00   |                   |  |
| Donkey Boiler Fee            | £          | When received,    |  |
| Travelling Expenses (if any) | £ 10.30    |                   |  |

John S. Hecks  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. JUN. 23. 1916  
Assigned + L.M.C. 5.16

MACHINERY CERTIFICATE  
UNITED



Boston

Certificate (if required) to be sent to

Rpt. 5.  
Date of writing  
No. in Reg. Book.  
Master  
Engines made  
Boilers made  
Registered  
MULTI  
(Letter for  
Boilers  
No. of Cert  
safety valve  
Are they f  
Smallest d  
Material o  
Descrip. o  
Lap of pl  
rules 2  
boiler 3  
Description  
plates: M  
Top 7 1/4  
smallest p  
Pitch of s  
Area sup  
Lower ba  
Pitch of  
water spo  
girder at  
Working  
separately  
holes  
If stiffene  
Working  
VERT  
Made at  
tested by  
No. of sa  
enter the  
strength  
Lap of p  
Radius o  
Thickness  
plates  
Thickness  
Dates of Survey while building