

# REPORT ON MACHINERY.

No. 72795

Received at London Office 4 - APR 1916

Survey Report 4 - APR 1916 when handed in at Local Office 4 - APR 1916 Port of London

Survey held at Great Yarmouth Date, First Survey 11 May 1915 Last Survey 31-3-16 19  
on the S.S. "Xbird" (Number of Visits 26) Tons { Gross 310 Net

Built at Great Yarmouth By whom built Brattice & Co. Ltd. When built 1916

Made at Great Yarmouth By whom made Brattice & Co. Ltd. when made 1916

Made at Stockton By whom made Peley Bros Ltd when made 1915

Registered Horse Power Owners R & B Paul Ltd Port belonging to Ipswich

Horse Power as per Section 28 73 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted No

Engines, &c. — Description of Engines Compound Surface condensing No. of Cylinders 2 No. of Cranks 2  
of Cylinders 14" and 36" Length of Stroke 24" Revs. per minute 112 Dia. of Screw shaft 7 1/2" Material of screw shaft Steel

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  
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

on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two  
are fitted, is the shaft lapped or protected between the liners Length of stern bush 2-11"

of Thrust shaft as fitted 4 1/2" Dia. of Crank shaft journals 4 1/2" Dia. of Crank pin 7 1/2" Size of Crank webs 9 x 4 1/2" Dia. of thrust shaft under  
screws 7 1/2" Dia. of screw 2-6 Pitch of Screw 11-0 No. of Blades 4 State whether moveable No Total surface 25'6"

of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work Yes  
of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work Yes

of Donkey Engines 2 Sizes of Pumps 5 1/4" x 3 1/2" x 5 No. and size of Suctions connected to both Bilge and Donkey pumps  
Engine Room Three 2" dia In Holds, &c. Three 2" in hold One each side

are and after peak tanks  
of Bilge Injections one size 4" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size Yes 2" dia

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  
all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

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 Above  
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

at pipes are carried through the bunkers Bilge suction, & steering engine steam & exhaust How are they protected Iron covers  
all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

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 1-12-15 of Stern Tube 1-12-15 Screw shaft and Propeller 1-12-15

the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c. — (Letter for record) Manufacturers of Steel  
Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boiler One single ended

Working Pressure 130 lb Tested by hydraulic pressure to Date of test No. of Certificate  
in each boiler be worked separately Area of fire grate in each boiler 37.7 sq ft No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 4.9 Pressure to which they are adjusted 135 lb Are they fitted with easing gear Yes  
smallest distance between boilers or uptakes and bunkers or woodwork No side bunkers 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  
eng. seams Diameter of rivet holes in long seams Pitch of rivets Lap of plates or width of butt straps

Percentage of strength of longitudinal joint 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 bottom Thickness of plates crown bottom Description of longitudinal joint No. of strengthening rings  
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides If stays are fitted with nuts or riveted heads Working pressure by rules End plates in steam space  
Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules Material of stays

Material Thickness Pitch of stays How are 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 as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler 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

0212886200-184600

Lloyd's Register Foundation

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied :-

- 2 Connecting rod top end bolts nuts ✓
- 2 " " bolt " " " ✓
- 2 Main bearing bolts nuts ✓
- 1 Set of coupling " " ✓
- 1 Set feed & bilge pump valves ✓

A quantity of assorted bolts nuts & Iron of various sizes ✓  
 One propeller, one main feed & one donkey feed valve, & 1 set each of an ten. j.p. valves ✓

The foregoing is a correct description,

ORABTREE & CO., LIMITED

*A. A. Fourn*

Manufacturer.

Dates of Survey while building { During progress of work in shops - - (1915) May 11. 18 June 25 July 2. 21 Aug 5. 26 Sep 10. 22 Oct 7. 21 Nov 2. 15. 18 Dec 11.  
 { During erection on board vessel - - - 23. 12. 15. (1916) Jan 14 Feb 11. 24 Mar 3. 9. 10. 14. 31  
 Total No. of visits 26

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts - Cylinders <sup>2. 7. 15</sup> 2. 7. 15 Slides <sup>11. 5. 15</sup> 11. 5. 15 Covers <sup>10. 9. 15</sup> 10. 9. 15 Pistons <sup>10. 9. 15</sup> 10. 9. 15 Rods <sup>7. 10. 15</sup> 7. 10. 15  
 Connecting rods <sup>7. 10. 15</sup> 21. 10. 15 Crank shaft ✓ Thrust shaft <sup>16. 12. 15</sup> 16. 12. 15 Tunnel shafts ✓ Screw shaft ✓ Propeller <sup>22. 9. 15</sup> 22. 9. 15  
 Stern tube <sup>22. 9. 15</sup> 22. 9. 15 Steam pipes tested *At Hull* Engine and boiler seatings <sup>23. 12. 15</sup> 23. 12. 15 Engines holding down bolts <sup>14. 1. 16</sup> 14. 1. 16

Completion of pumping arrangements 4. 2. 16 Boiler fixed 14. 1. 16 Engines tried under steam 9. 3. 16  
 Main boiler safety valves adjusted 10. 3. 16 Thickness of adjusting washers P. valve <sup>14</sup> 64 S. valve <sup>16</sup> 64

Material of Crank shaft *Steel* Identification Mark on Do. <sup>N° 4090</sup> C.F.H. Material of Thrust shaft *Steel* Identification Mark on Do. <sup>N° 796</sup> A.E.F.  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Steel* Identification Marks on Do. <sup>N° 4090</sup> C.F.H.

Material of Steam Pipes *Copper* ✓ Test pressure 260 lb. ✓  
 Is an installation fitted for burning oil fuel ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓  
 Is this machinery duplicate of a previous case ✓ If so, state name of vessel ✓

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*These engines have been constructed under Special Survey, the material tested as per Rules and the workmanship is good, after being fitted in the vessel examined under working conditions and found satisfactory - the boiler examined under steam & the safety valves adjusted to 135 lb. - and is now eligible in my opinion for the record of + L.M.C. 3-16 in the Register Book.*

It is submitted that  
 this vessel is eligible for  
 THE RECORD + L.M.C. 3.16.

*J.W.D.*  
 4/4/16  
*J.P.R.*

The amount of Entry Fee ... £ 1-0-0  
 Special ... £ 6-8-0  
 Donkey Boiler Fee ... £  
 Travelling Expenses (if any) £ 4-4-0

*A.E. Farminel*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. - 7 APR. 1916  
 Assigned + L.M.C. 3.16

MACHINERY CERTIFICATE  
 WRITTEN



Certificate (if required) to be sent to the Registrar of Shipping (if required) to be sent to the Registrar of Shipping