

REPORT ON MACHINERY

No. 61982

FRI. MAR. 22. 1912

Received at London Office
 Date of writing Report 21st March 1912 With handed in at Local Office 21st March 1912 Port of Newcastle on Tyne
 No. in Survey held at South Shields Date, First Survey 4th Oct. 1911 Last Survey 20th March 1912
 Reg. Book. 49 on the Scrub Lug Dreadful (Number of Visits 59)
 Master _____ Built at Shields By whom built Hepple & Co Ld Tons { Gross 250 Net 92 When built 1912
 Engines made at Shields By whom made Hepple & Co Ld when made 1912
 Boilers made at Hebburn By whom made Palmer & Co when made 1912
 Registered Horse Power _____ Owner Canadian Western Lumber Co Port belonging to British
 Nom. Horse Power as per Section 28 107 If 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 15, 23 1/2, 38 Length of Stroke 30 Revs. per minute 100 Dia. of Screw shaft as per rule 8.7 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 Yes 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 Yes
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 42
 Dia. of Tunnel shaft as per rule 7.63 Dia. of Crank shaft journals as per rule 8 Dia. of Crank pin 8 Size of Crank webs 4 1/2 x 5 1/2 Dia. of thrust shaft under collars 8 Dia. of screw 1 1/2 Pitch of Screw 13-0 No. of Blades 4 State whether moveable No Total surface 37 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 15 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 15 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two Sizes of Pumps 7 1/2 x 5, 6 x 6, 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 2" diam In Holds, &c. Four 2" diameter
 No. of Bilge Injections 1 sizes 4 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes, 2"
 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 Yes
 Are all connections with the sea direct on the skin of the ship Yes Are the Valves or Cocks Both
 Are they fixed sufficiently high on the ship's side to be seen without using the stokehold plates Yes Are the Discharge Pipes above or below the deep water line Above
 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 None How are they protected Yes
 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 20/12/11 of Stern Tube 11/1/12 Screw shaft and Propeller 27/2/12
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel See attached report on boiler.
 Total Heating Surface of Boilers 1970 sq ft Is Forced Draft fitted No No. and Description of Boilers One, Single Ended
 Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 21/12/11 No. of Certificate 8253
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63 sq ft No. and Description of Safety Valves to each boiler No, direct spring Area of each valve 7.07 sq ft Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 16" Mean dia. of boilers 15-0 Length 12-0 Material of shell plates Steel
 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 _____ 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 _____ Thickness of plates _____ 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 _____ 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 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 in superheater _____ Are they fitted with easing gear _____



VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. None Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____ Rivets _____ Plates _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— Propeller, propeller shaft, two halves of O brasses & two de Bottom & 2 top end brasses, one set strap & bolts, & sheave, one set of air pump valves, 2 top & 2 bottom end bolts & nuts, one set coupling bolts & nuts, one set of feed & bilge pump valves, assorted bolts & nuts & rivets, 10 condenser tubes etc.

The foregoing is a correct description,

W. J. Hepple & Co. Ltd

Manufacturer.

MANAGER, DIRECTOR. 1911 Oct. 4. 12. 13. 14. 16. 18. 20. 24. 26 Nov. 3. 6. 9. 14. 15. 21. 22. 23. 24 Dec. 4. 13. 19. 20. 21. 22. 27. 28. 30.

1912 Jan. 5. 8. 10. 11. 15. 17. 19. 22. 24. 29. 30. 31. Feb. 2. 5. 7. 12. 14. 21. 22. 23. 26. 27. 28. 29. Mar. 1. 4. 6. 7. 11. 12. 16. 20.

Dates of Survey while building _____ Total No. of visits _____

Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts _____

Connecting rod _____ Crank shaft _____ Thrust shaft _____ Tunnel shafts _____ Screw shaft _____ Propeller _____

Stern tube _____ Steam pipes tested _____ Engine and boiler seatings _____ Engines holding down bolts _____

Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material of Crank shaft _____ Identification Mark on Do. _____ Material of Thrust shaft _____ Identification Mark on Do. _____

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shaft _____ Identification Marks on Do. _____

Material of Steam Pipes _____ Test pressure _____

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built under special survey, the materials & workmanship are of good quality, it & the boiler have been securely fitted on board and satisfactorily tested under steam. In my opinion this vessel is now eligible for record of L.M.C. 3-12 in register book.

Boiler plan, 3 forging reports, boiler invoices & opt on boiler now attached.

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 3. 12.

J.W.D.
24/3/12

George Murdoch
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £ 2 : 0 : When applied for, _____

Special .. £ 16 : 0 : MAR. 20. 1912.

Donkey Boiler Fee .. £ _____ When received, _____

Travelling Expenses (if any) £ _____

Committee's Minute _____ TUE. MAR. 26. 1912

Assigned _____ + L.M.C. 3. 12.

MACHINERY CERTIFICATE WRITTEN.



Rpt. 5a.

Date of writing _____

No. in Sur. Reg. Book. 49 on _____

Master _____

Engines made _____

Boilers made _____

Registered Ho _____

MULTITU _____

(Letter for rec _____)

Boilers _____

No. of Certificate _____

safety valves to _____

Are they fitted _____

Smallest distan _____

Material of she _____

Descrip. of riv _____

Lap of plates _____

rules 187 _____

boiler 3- _____

Description of _____

plates: Materi _____

Top 8 5/8" x 8 1/2" _____

smallest part _____

Pitch of stays _____

Area supported _____

Lower back pla _____

Pitch of tubes _____

water spaces _____

girder at centre _____

Working pressu _____

separately _____

holes _____

If stiffened with _____

Working pressu _____

Dates of Survey while building _____

GENERAL _____

been en _____

workm _____

Survey Fee _____

Travelling F _____

Committee' _____

Assigned _____

NEWCASTLE ON TYNE