

REPORT ON MACHINERY.

Received at London Office

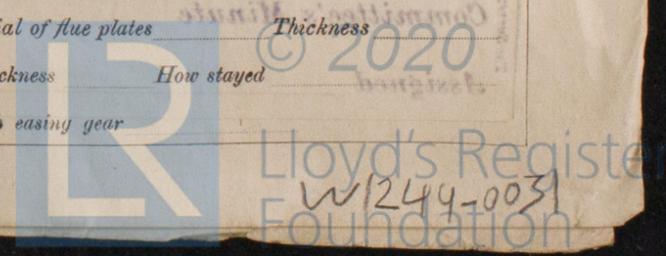
MON. MAY 25. 1914

Date of writing Report 22nd May 1914 when handed in at Local Office 22nd May 1914 Port of NEWCASTLE-ON-TYNE.

No. in Survey held at South Shields Date, First Survey 13th Jan 1914 Last Survey 20th May 1914
 Reg. Book. 67 on the Steel Se. Sp. Hullman (Number of Visits 34)
 Master Shields Built at Shields By whom built Hepple & Co Tons { Gross 171 Net 10
 Engines made at Shields By whom made Hepple & Co when made 1914
 Boilers made at Sunderland By whom made North Eastern Marine Eng Co when made 1914
 Registered Horse Power _____ Owners J. Gray & Co Port belonging to Hull
 Nom. Horse Power as per Section 28 92 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 14, 22 & 36 Length of Stroke 24 Revs. per minute 110 Dia. of Screw shaft 7.85 as per rule 7.52 Material of Iron
 as fitted 5.78 screw shaft)
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Liner in way of gland bush only the after end of the liner made water tight
 in the propeller boss 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 33 3/4
 Dia. of Int shaft as per rule 6.29 6.7 as fitted 6.78 Dia. of Crank shaft journals as per rule 6.604 7.04 as fitted 7.18 Dia. of Crank pin 7/8 Size of Crank webs 2 1/4 x 5 Dia. of thrust shaft under
 collars 7/8 Dia. of screw 9-0 Pitch of Screw 12-6 No. of Blades 4 State whether moveable No Total surface 32 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines One Sizes of Pumps 3 1/2 x 5 duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 2" diameter In Holds, &c. One 2" forward and one 2" aft
 No. of Bilge Injections one sizes 2 3/4 Connected to condenser, or to circulating pump Pump 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
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
 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 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 Main steam How are they protected Steel tank casing
 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 30-31st 3/14 of Stern Tube 10th 11th-30/3/14 Screw shaft and Propeller 2/4/14
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from _____

BOILERS, &c.—(Letter for record S) Manufacturers of Steel See attached report on boiler No 26019
 Total Heating Surface of Boilers 1725 sq ft Is Forced Draft fitted No No. and Description of Boilers One Single Ended
 Working Pressure 175 lb per sq in Tested by hydraulic pressure to 350 lb per sq in Date of test 17/2/14 No. of Certificate 3191
 Can each boiler be worked separately Area of fire grate in each boiler 44 sq ft No. and Description of Safety Valves to
 each boiler Two direct spring one of each valve 7.07 Pressure to which they are adjusted 180 lb per sq in Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 14 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 _____ 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 _____
 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 _____



IS A DONKEY BOILER FITTED? **No**

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:

Two top & 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, one set of coupling bolts & nuts, one set of field & bilge pump valves, assorted bolts & nuts, a few bars of iron one set each of air & circulating pump valves, 6 condenser tubes & one stern tube brush.

The foregoing is a correct description,

W. J. Hepple & Co. Ltd

W. J. Hepple

Manufacturer.

Dates of Survey while building: 1914 Jan 13, 14, 20, 28, Feb 4, 11, 13, 24, Mar 2, 9, 10, 11, 16, 19, 27, 30, 31, Apr 1, 2, 3, 8, 20, 21, 27, 29, May 2, 11, 14, 15, 16, 18, 19, 20. Total No. of visits: 34

Dates of Examination of principal parts: Cylinders 13/1, 14/1, 20/1, 21/1, 28/1, 31/1, 3/2, 13/2, 14/2, 24/2, 27/2, 31/2, 3/3, 13/3, 14/3, 24/3, 27/3, 31/3, 3/4, 13/4, 14/4, 24/4, 27/4, 31/4. Slides 11/2, 13/2, 14/2, 24/2, 27/2, 31/2. Covers 11/2, 13/2, 14/2, 24/2, 27/2, 31/2. Pistons 11/2, 13/2, 14/2, 24/2, 27/2, 31/2. Rods 14/1, 20/1, 25/1, 31/1. Connecting rods 14/1, 20/1, 25/1, 31/1. Crank shaft 13/2, 14/2, 20/1, 25/1. Thrust shaft 11/3, 31/3. Propeller 11/3, 14/3. Stern tube 10/3, 11/3, 14/3. Steam pipes tested 6/5, 11/4. Engine and boiler seatings 8/4, 14/4. Engines holding down bolts 7/4, 14/4, 14/4. Completion of pumping arrangements 16/5, 14/4. Boilers fixed 16/4, 14/4. Engines tried under steam 16/5, 14/4. Main boiler safety valves adjusted 16/5, 14/4. Thickness of adjusting washers 5/16 & 5/16. Material of Crank shaft Steel Identification Mark on Do. 207 N GM. Material of Thrust shaft Steel Identification Mark on Do. 207 N GM. Material of Screw shafts Iron Identification Marks on Do. do. Material of Steam Pipes Copper Test pressure 350 lbs per sq. in. Is an installation fitted for burning oil fuel No. 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: The machinery of this vessel has been built under special survey, the materials and workmanship are of good quality, it has been securely fitted on board and satisfactorily tried under full steam. In my opinion the machinery of this vessel is now eligible for record: L M C 5. 14 (mixed) in the register book. Boiler plan & minis. See report on bolts, and forging report on shafting now forwarded.

It is submitted that this vessel is eligible for THE RECORD. + L M C 5. 14. J.W. 26/5/14 H.G.P.

The amount of Entry Fee ... £ 1 : 0 : When applied for, MAY 23 1914. Special ... £ 13 : 16 : When received, 15/6/14. Donkey Boiler Fee ... £ Travelling Expenses (if any) £ Committee's Minute TUE. MAY. 26. 1914 Assigned + L M C 5. 14

NEWCASTLE-ON-TYNE.

Certificate (if required) to be sent to...

The Surveyors are requested not to write on or below the space for Committee's Minute.

MACHINERY CERTIFICATE WRITTEN.



Rpt. 5a. Date of writing Report No. in Survey Reg. Book. on the Master Engines made at Boilers made at Registered Horse Power MULTITUBULAR (Letter for record Boilers One No. of Certificate safety valves to each Are they fitted with Smallest distance between Material of shell plates Description of riveting Lap of plates on water rules 1 1/2 x 5 lbs. boiler Three plates Description of longitudinal plates: Material of Top 8 x 1 1/2 x 2 1/2 If stay smallest part 2.1 Pitch of stays 2 1/2 Area supported by lower back plate Pitch of tubes 2 1/2 x water spaces 14 girder at centre Working pressure by separately holes Pitch of If stiffened with rings Working pressure of Dates of Survey while building During progress of work in shops During erection on board vessel GENERAL RE under speci the by hand the Boiler