

REPORT ON MACHINERY.

No. 66128

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 S.S. Hullman
Master Built at Shields By whom built Hepple & Co Tons Gross 171 Net 10
Engines made at S. Shields By whom made Hepple & Co when made 1914
Boilers made at Sunderland By whom made North Eastern Marine Engineering 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 7.83 as per rule 7.52 Material of Iron
Is the screw shaft fitted with a continuous liner the whole length of the stern tube gland and nut 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 ~~Tunnel~~ shaft as per rule 6.29 6.7 as per rule 6.60 7.04 Dia. of Crank shaft journals as fitted 7 7/8 Dia. of Crank pin 7 7/8 Size of Crank webs 2 1/4 x 5 Dia. of thrust shaft under
collars 7 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-20/13 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 Yes Area of fire grate in each boiler 44 sq. ft. No. and Description of Safety Valves to
each boiler No. direct spring Area of each valve 7.07 sq. in. 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 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 Thickness of plates 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 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?

SPARE GEAR. State the articles supplied:

No. If so, is a report now forwarded? *Yes*
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 bush.

The foregoing is a correct description,

HEPPLE & CO. LTD

W. J. Hepple

Manufacturer.

Dates of Survey while building

During progress of work in shops
During erection on board vessel
Total No. of visits

1914 Jan 13. 14. 20. 25. 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.

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts

Cylinders 13/1, 14/1, 20/1, 25/1
Connecting rods 14/1, 20/1, 25/1
Crank shaft 13/2, 14/2, 20/2, 25/2
Thrust shaft 11/3, 31/3, 31/3, 31/3
Stern tube 10/3, 11/3, 14/3
Steam pipes tested 6/5/14
Completion of pumping arrangements 16/5/14
Main boiler safety valves adjusted 16/5/14
Material of Crank shaft *Steel*
Material of Thrust shafts *do*
Material of Steam Pipes *Copper*
Is an installation fitted for burning oil fuel *No*
Have the requirements of Section 49 of the Rules been complied with *Yes*
Is this machinery duplicate of a previous case *No*
General Remarks (State quality of workmanship, opinions as to class, &c.)
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 boiler, and forging report on shafting now forwarded.

It is submitted that this vessel is eligible for THE RECORD. + L M C 5.14.

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 13 : 16 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :

When applied for, MAY 23 1914
When received, 15/6/14

Committee's Minute

Assigned

TUE. MAY. 26. 1914

+ L M C 5.14

MACHINERY CERTIFICATE WRITTEN.

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

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

Descrip. of riveting

Lap of plates on water

rules 1 1/2 x 5 lbs.

boiler Three plates

Description of longitudinal

plates: Material Steel

Top 8 x 12 1/2 If stay

smallest part 2 x 1

Pitch of stays 22 x 1

Area supported by each

Lower back plate Steel

Pitch of tubes 12 x 12

water spaces 14

girder at centre 20

Working pressure by

separately 1

holes Pitch of

If stiffened with rings

Working pressure of

Dates of Survey while building

GENERAL REMARKS

under special survey
the hydraulic
the boiler is

Survey Fee ...

Travelling Expenses

Committee's Minute

Assigned



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