

REPORT ON MACHINERY.

No. 63190

Received at London Office

TUE. OCT. 29. 1912

NEWCASTLE - ON - TYNE.

of writing Report 19th Oct 1912 When handed in at Local Office 22nd Oct 1912 Port of

in Survey held at South Shields

Date, First Survey May 3rdLast Survey 14th Oct 1912

Book.

(Number of Visits 38)

up. on the "ROBERT HASTIE"

ster J. Rays

Built at South Shields

By whom built Jos. J. Eltringham & Co

When built 1912

ines made at South Shields

By whom made

G. J. Grey

when made 1912

lers made at South Shields

By whom made

Jos. J. Eltringham & Co

when made 1912

islered Horse Power

Owners

R. Hastie & Sons

Port belonging to N. Shields

n. Horse Power as per Section 28

80

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

GINES, &c.—Description of Engines Triple Expansion Surface Cond^s No. of Cylinders 3 No. of Cranks 3

No. of Cylinders 13" - 21 1/2" - 35" Length of Stroke 24" Revs. per minute 110 Dia. of Screw shaft as per rule 7.69" Material of Steel

the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight

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

ween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

ers are fitted, is the shaft lapped or protected between the liners No Length of stern bush 2'-7"

Dia. of Thrust shaft as per rule 6.5" Dia. of Crank shaft journals as per rule 6.83" Dia. of Crank pin 6 7/8" Size of Crank webs 13 1/2" x 4 1/2" Dia. of thrust shaft under

llars 6 7/8" Dia. of screw 9'-0" Pitch of Screw 10'-6" No. of Blades 4 State whether moveable No Total surface 31 sq ft

No. of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 13" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 3/8" Stroke 13" Can one be overhauled while the other is at work Yes

No. of Donkey Engines one Sizes of Pumps 5 1/4" x 3 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps

n Engine Room one - 2" In Holds, &c. one - 2"

No. of Bilge Injections 1 sizes 3" 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 None How are they protected

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 20-8-12 of Stern Tube 20-8-12 Screw shaft and Propeller 11-9-12

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel See attached report on boiler

Total Heating Surface of Boilers 1439 sq ft Is Forced Draft fitted No No. and Description of Boilers One single ended multi

Working Pressure 180 lbs Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler 52 sq ft No. and Description of Safety Valves to

each boiler Two - spring loaded Area of each valve 5.94 sq ft Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" 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

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 to superheater Are they fitted with easing gear

007626-007638-0157

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ 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 _____
Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____
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 _____ 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:— Two top end bolts & nuts; two bottom end bolts & nuts; two main bearing bolts; one set of coupling bolts; one set each of air, feed & bilge pump valves, assorted bolts & nuts & iron.

The foregoing is a correct description,
Manufacturer. *James Watson & Co. Glasgow*

Dates of Survey while building
During progress of work in shops -- 1912 May 3.8.13.6.30 Jun 4.6.10.13.19.24 Jul 1.4.9.22 Aug 8.12.16.19.20.21
During erection on board vessel --- 29 Sep 2.9.14.17.20.23.25.26.27.30 Oct 2.10.11.14.15.17
Total No. of visits 38
Is the approved plan of main boiler forwarded herewith Yes
" " " donkey " " " None

Dates of Examination of principal parts—Cylinders 1-8-12 Slides 29-8-12 Covers 12-8-12 Pistons 22-7-12 Rods 23-8-12
Connecting rods 23-8-12 Crank shaft 29-8-12 Thrust shaft 3-9-12 Tunnel shafts ✓ Screw shaft 19-8-12 Propeller 16-8-12
Stern tube 19-8-12 Steam pipes tested 11-10-12 Engine and boiler seatings 11-9-12 Engines holding down bolts 7-10-12
Completion of pumping arrangements 14-10-12 Boilers fixed 10-10-12 Engines tried under steam 15-10-12
Main boiler safety valves adjusted 15-10-12 Thickness of adjusting washers P. 3/8" S. 3/8"
Material of Crank shaft Steel Identification Mark on Do. 3111 W.D.H. Material of Thrust shaft Steel Identification Mark on Do. 3850 H.K.
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 7536 K.H.
Material of Steam Pipes Solid drawn copper ✓ Test pressure 360 lbs per sq. inch. ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been constructed under special survey, & the materials & workmanship are sound & good. The engines have been tried under steam, & the safety valves adjusted to their working pressure; the machinery is now in a good & safe working condition, & eligible in my opinion to have the notation + L.M.C. 10-12 in the register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10.12.
JURD. 29/10/12

The amount of Entry Fee .. £ 1 : 0 : 0 When applied for, OCT 28 1912
Special .. £ 12 : 0 : 0
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : :
When received, 9.11.12

Committee's Minute
Assigned
EDINOV 1-1912
+ L.M.C. 10.12

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



Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)