

Rpt. 4.

REPORT ON MACHINERY

No. 25967

FRI. JAN. 9-1914

Received at London Office

Date of writing Report

19

When handed in at Local Office

8. / 10 / 14 Port of Sunderland.

No. in Survey held at
Reg. Book.

SUNDERLAND.

Date, First Survey

5 August

Last Survey

6th Jan 1914

on the

H.M.S. "Glenearn"

(Number of Visits

28

Gross

4828

Net

3032

When built 1914

Master

Hartnell

Built at

Sunderland

By whom built

Bartram & Sons Ltd

Engines made at

By whom made

J. Dickinson & Sons Ltd

when made 1914

Boilers made at

By whom made

when made

1914

Registered Horse Power

Owners

McGregor, Gow & Co. Ltd

Port belonging to

London

Nom. Horse Power as per Section 28 401.

Is Refrigerating Machinery fitted for cargo purposes

no.

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Tri. C.P.D.

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

Length of Stroke

Revs. per minute

Dia. of Screw shaft

Material of

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

in the propeller boss

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

Dia. of Tunnel shaft

Dia. of Crank shaft journals

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

collars

Dia. of screw

Pitch of Screw

No. of Blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

In Holds, &c.

No. of Bilge Injections

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

What pipes are carried through the bunkers

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Dates of examination of completion of fitting of Sea Connections

21. 10. 13 of Stern Tube

6. 11. 13 Screw shaft and Propeller

6. 11. 13

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

top platform

BOILERS, &c.—(Letter for record

B)

Manufacturers of Steel

J. Spencer & Sons Ltd

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

three ordinary type

Working Pressure

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

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

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 to superheater

Are they fitted with easing gear

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Lloyd's Register

Foundation

W12148-0087

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 casing 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
 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:—Propeller & propeller shaft, two top and bottom end bolts & nuts. Set of coupling bolts & nuts. 2 main bearing bolts & nuts. Set of feed & bilge pump valves. two sets air & 3 sea air pump valves. 2 donkey. 2 ballast valves, assorted iron bolts & nuts.

The foregoing is a correct description,

John Dickinson & Sons, Limited.

Manufacturer.

Dates of Survey while building During progress of work in shops -- 1913 Aug. 5. 6. 27. 29. Sep. 15. 24. Oct. 1. 6. 7. 15. 16. 17. 21. 27. 30. Nov. 3. 4. 5. 6. 7
 During erection on board vessel --- 10. 12. 14. 17. 25. Dec. 1. 8. Jan. 6.
 Total No. of visits (28) Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 16. 10. 13. Slides 15. 9. 13. Covers 15. 9. 13. Pistons 7. 10. 13. Rods 7. 10. 13
 Connecting rods 7. 10. 13. Crank shaft 15. 10. 13. Thrust shaft 15. 10. 13. Tunnel shafts 15. 10. 13. Screw shaft 27. 10. 13. Propeller 27. 10. 13
 Stern tube 27. 10. 13. Steam pipes tested 10. 11. 13. Engine and boiler seatings 21. 10. 13. Engines holding down bolts 7. 11. 13
 Completion of pumping arrangements 14. 11. 13. Boilers fixed 12. 11. 13. Engines tried under steam 14. 11. 13
 Main boiler safety valves adjusted 14. 11. 13. Thickness of adjusting washers PB $f \frac{13}{32}$ a $\frac{13}{32}$ C.B. $\frac{11}{32}$ s $\frac{11}{32}$ S.B. $f \frac{11}{32}$ a $\frac{11}{32}$ full
 Material of Crank shaft S Identification Mark on Do. W.C. K.H. Material of Thrust shaft S Identification Mark on Do. C.A.B.
 Material of Tunnel shafts S Identification Marks on Do. C.A.B. A.F.B. Material of Screw shafts S Iron Identification Marks on Do. J.T.P.
 Material of Steam Pipes C. Test pressure 400 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. Machinery & boilers built under special survey. Materials and workmanship good. Engines & boilers examined under full steam & found satisfactory. It is submitted that the Record of L.M.C. 1. 14. be inserted in the Register book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 1. 14.

The amount of Entry Fee .. £ 3 : : : When applied for, 7. 1. 1914
 Special .. £ 40 : : :
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ : : : When received, 9. 1. 1914

Committee's Minute

Assigned

TUE. JAN. 13. 1914

+ L.M.C. 1. 14.

J. E. Findlay
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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