

REPORT ON MACHINERY.

No. 65923

Port of London

THUR. 24 DEC 1903

No. in Survey held at Yarmouth

Date, first Survey Sept

Last Survey Dec 12 1903

Reg. Book.

on the

ss. "Earn"

(Number of Visits 4)

Master

Built at Hull

By whom built G. Cooper

Tons } Gross 8
Net
When built

Engines made at Yarmouth

By whom made Grabbree Ltd.

when made 1903

Boilers made at Stockton

By whom made Riley Bros

when made 1903

Registered Horse Power

Owners Simpson & Farquhar

Port belonging to Barry

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted no

Is Electric Light fitted no

ENGINES, &c.—Description of Engines

Compound

No. of Cylinders 2

No. of Cranks 2

Dia. of Cylinders 11 & 22

Length of Stroke 14 Revs. per minute

Dia. of Screw shaft as per rule 5.05

Material of screw shaft Steel

Is 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

in the propeller boss no 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 20

Dia. of Tunnel shaft as per rule 4.2

Dia. of Crank shaft journals as per rule 4.4

Dia. of Crank pin 4 1/2

Size of Crank webs 2 3/4 x 6

Dia. of thrust shaft under collars 4 1/2

Dia. of screw 6-0

Pitch of screw 7-0

No. of blades 4

State whether moveable no

Total surface 11 1/4

No. of Feed pumps 1

Diameter of ditto 2 1/8

Stroke 5 3/4

Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1

Diameter of ditto 2 1/8

Stroke 5 3/4

Can one be overhauled while the other is at work ✓

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

No. of Donkey Engines one

Sizes of Pumps bilge etc 3x6

feet 2 1/4 x 6

In Engine Room one 2" engine suction

one 2" ejector

In Holds, &c. 2" ejector, 2" engine & donkey suction

one 2" donkey suction

No. of bilge injections 1

sizes 2" Connected to condenser or to circulating pump

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 none

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launching

Is the screw shaft tunnel watertight ✓

Is it fitted with a watertight door ✓

worked from ✓

BOILERS, &c.—

(Letter for record _____) Total Heating Surface of Boilers

Is forced draft fitted no

No. and Description of Boilers one cyl. multitubular

Working Pressure 120 lbs

Tested by hydraulic pressure to

Date of test

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of safety valves to

each boiler 2 direct spring

Area of each valve 3.14 sq. ft.

Smallest distance between boilers or uptakes and bunkers or woodwork 6"

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are they 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

Length of plain part top

Thickness of plates bottom

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

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

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

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

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

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

End plates: Thickness

How stayed

Working pressure by rules

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End plates: Thickness

How stayed

Working pressure by rules

Area of safety valves to superheater

Are they

DONKEY BOILER— No. _____ Description _____

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

Working pressure tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ 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 _____ 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 _____

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

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *as per rule.*

The foregoing is a correct description,

Manufacturer. _____

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - -

Total No. of s _____

Dec 2. 1903 21 Dec 12

Is the approved plan of main boiler forwarded herewith _____

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines have been constructed under special survey the material tested in accordance with the Society's rules & the workmanship is good.

The machinery has been satisfactorily fitted onboard and the safety valves adjusted under steam & engines tried under steam.

In my opinion this vessel is eligible for the record + LMC 12.03

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 12.03

Bel 29/12/03 Working press 120 lb S.M.S.

Certificate (if required) to be sent to _____

The amount of Entry Fee.. £ 1 : 0 : 0 When applied for, _____

Special £ 5 : 6 : 0 *29.12.03*

Donkey Boiler Fee £ : : : When received, _____

Travelling Expenses (if any) £ 1 : 13 : 0 *12.5 1904*

Committee's Minute *TUES. DEC 29 1903*

Assigned

+ LMC 12,03

MACHINERY CERTIFICATE WRITTEN.

C. Marshall

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



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FLAT (of B) GARB State thick way of Bu Write 'Sheer Strake' opposite its corresponding letter. DOUB Leng and thickn POOP RAISI BRID FORE LENG manu Plate Has t FRA REV LOWE Bows Topm Rigg Sails Equ Num Certif 50 50 50 Num Cer 34 Iron St or Ste Boa Pun Win Engi Whe Coal Nun Cell Car Stat Nun Bul The Bui

TELEPHONE NO. 60.

