

REPORT ON MACHINERY

No. 74983

FRI. SEP. 20. 1912

Date of writing Report

19

When handed in at Local Office

19

Port of London

No. in Survey held at

Newbury

Date, First Survey 24th MayLast Survey 12th Sept. 1912

Reg. Book.

on the *Kromhout Motor Engine No. M122*

(Number of Visits)

Master

Built at

By whom built *Boston Engineering & L^d*

Tons

Gross

Net

When built

Engines made at

Newbury

By whom made

Pliny & Son L^d

when made 1912

Boilers made at

BRAKE

By whom made

when made

Registered Horse Power 90

Owners

Port belonging to

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

Two Cycle, Kromhout Oil Engine

No. of Cylinders 2

No. of Cranks 2

Dia. of Cylinders 335 $\frac{3}{4}$ "Length of Stroke 350 $\frac{3}{4}$ "

Revs. per minute 300

Dia. of Screw shaft

as per rule 4.8"

Material of

Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Is liners* Is the after end of the liner made water tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ☒ If twoliners are fitted, is the shaft lapped or protected between the liners ☒ Length of stern bush 1'-6"Dia. of Tunnel shaft as per rule 104 $\frac{3}{4}$ " Dia. of Crank shaft journals as per rule 115.67 $\frac{3}{4}$ " Dia. of Crank pin 120 $\frac{3}{4}$ " Size of Crank webs 6 $\frac{1}{2}$ " Dia. of thrust shaft undercollars 10 $\frac{1}{2}$ " Dia. of screw 3'-10" Pitch of Screw 3'-1 $\frac{1}{2}$ " No. of Blades 4 State whether moveable ☒ Total surface 8 $\frac{1}{2}$ "No. of *CIRCULATING* pumps *one* Diameter of ditto 65 $\frac{3}{4}$ " Stroke 44 $\frac{3}{4}$ " Can one be overhauled while the other is at work ☒No. of Bilge pumps *one* Diameter of ditto 65 $\frac{3}{4}$ " Stroke 44 $\frac{3}{4}$ " 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 the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

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 Are the Blow Off Cocks fitted with a spigot and brass covering plate

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 of Stern Tube Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

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

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

W82-0134

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:—

The foregoing is a correct description,

per pro. **PLENTY & SON, LIMITED.**

Manufacturer.

J. P. Plenty

Dates of Survey while building { During progress of work in shops -- } 192: May 20 June 9 July 3 26 Sept 12
 { During erection on board vessel --- }
 Total No. of visits 5

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 19.6.12 Slides ☒ Covers ☒ Pistons 19.6.12 Rods ☒
 Connecting rods 19.6.12 Crank shaft 19.6.12 Thrust shaft 19.6.12 Tunnel shafts ☒ Screw shaft 26.7.12 Propeller 26.7.12
 Stern tube 26.7.12 Steam pipes tested ☒ Engine and boiler seatings ☒ Engines holding down bolts ☒
 Completion of pumping arrangements ☒ Boilers fixed ☒ Engines tried under steam ☒
 Main boiler safety valves adjusted ☒ Thickness of adjusting washers ☒
 Material of Crank shaft *Steel* Identification Mark on Do. *N320 P* Material of Thrust shaft *Steel* Identification Mark on Do. *N325 B*
 Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts *Steel* Identification Marks on Do. *26.7.12 TRB*
 Material of Steam Pipes ☒ Test pressure ☒

General Remarks

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

These Engines have been constructed under special survey, the material has been tested as required by Rules & the workmanship is good. Intended for smooth water purposes. Engines tried on test bench & found to work satisfactorily. Fuel tank tested & 15 ft head & found tight - & tested on board with fittings.

Above forwarded to Garston Graving & R C° Liverpool for the purpose of fitting on board.

The amount of Entry Fee .. £

Special *1/3 London* 18 0 0 *20.9.12*

Donkey Boiler Fee .. £

Travelling Expenses (if any) £ 1 6 0 *20.9.12*

Committee's Minute

Assigned

Ronald Blackie & J. H. Cornick
 Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.



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