

REPORT ON MACHINERY.

No. 23000

Received at London Office

JUL 27 SEP 1910

Date of writing Report

19

When handed in at Local Office

24. 9. 1910 Port of Hull.

No. in Survey held at

Hull

Date, First Survey

May 4th

Last Survey

Sep. 20th 1910

Reg. Book.

18th Reg. on the S/Trawler.

H. A. L. RUSSELL

(Number of Visits 34)

Master

Built at

Selby

By whom built

Bochrame & Sons

Tons { Gross 256
Net 103.

When built 1910

Engines made at

Hull

By whom made

Amos & Smith

when made

5.

Boilers made at

5

By whom made

5

when made

5

Registered Horse Power

Owners Pickering & Haldane S/Trawler Port belonging to

Hull.

Nom. Horse Power as per Section 28

80.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

No.

ENGINES, &c.—Description of Engines

Inverted triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders 12³/₄ - 22 - 36

Length of Stroke 24"

Revs. per minute 114.

Dia. of Screw shaft as per rule 7.55

Material of screw shaft

Iron

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

Yes.

Is the after end of the liner made water tight

in 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

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

Yes.

If two

liners are fitted, is the shaft lapped or protected between the liners

Yes.

Length of stern bush 2'-9"

Dia. of Tunnel shaft as per rule 6.71

Dia. of Crank shaft journals as per rule 7.04

Dia. of Crank pin 7¹/₂"Size of Crank webs 4³/₄ x 4³/₄"collars 7¹/₂"

Dia. of screw 9'-3"

Pitch of Screw 10'-9"

No. of Blades 4

State whether moveable

No.

Total surface 31¹/₂"

No. of Feed pumps one

Diameter of ditto 27"

Stroke 12"

Can one be overhauled while the other is at work

-

No. of Bilge pumps one

Diameter of ditto 27"

Stroke 12"

Can one be overhauled while the other is at work

-

No. of Donkey Engines one

Sizes of Pumps 6" x 4¹/₂" x 6"

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

In Engine Room 2-2 (For & aft)

In Holds, &c. 3-2 (Plush well fish room for

Ld. 2' Gyron suction to all bilges with discharge on deck.

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 2' Gyron

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

Yes.

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

Hold suction

How are they protected Wood 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

22. 7. 10

of Stern Tube

22. 7. 10

Screw shaft and Propeller 22. 7. 10

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes.

worked from

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Phoenix & Hordern

Total Heating Surface of Boilers 1320¹/₂

Is Forced Draft fitted

No.

No. and Description of Boilers

1 S.E. Multitubular

Working Pressure 200.

Tested by hydraulic pressure to

400.

Date of test 22. 8. 10

No. of Certificate 1764.

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler

36¹/₂"

No. and Description of Safety Valves to

each boiler 2 Spring loaded

Area of each valve 4.9084.

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

7"

Mean dia. of boilers 12'-9"

Length 9'-9¹/₂"

Material of shell plates

Steel.

Thickness 1¹/₂"

Range of tensile strength 29-33

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams 3A Lap

long. seams 3A S with

Diameter of rivet holes in long. seams 1¹/₂"Pitch of rivets 7¹/₂"Lap of plates or width of butt straps 16¹/₂"

Per centages of strength of longitudinal joint

rivets 89.5

plate 85

Working pressure of shell by rules

201.

Size of manhole in shell 16 x 12"

Size of compensating ring 40 x 30 x 1¹/₂"

No. and Description of Furnaces in each boiler

2 plain

Material Steel. Outside diameter 3'-8¹/₂"

Length of plain part

top 64.5

bottom 60

Thickness of plates

crown 1¹/₂"bottom 1¹/₂"

Description of longitudinal joint

Welded

No. of strengthening rings

-

Working pressure of furnace by the rules 208.

Combustion chamber plates: Material Steel. Thickness: Sides 4¹/₈"Back 4¹/₈"Top 4¹/₈"Bottom 4¹/₈"Pitch of stays to ditto: Sides 9¹/₂ x 8"

Back 9 x 9"

Top 9¹/₂ x 8"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules 202

Material of stays Steel.

Diameter at smallest part 1¹/₂ x 2.297Area supported by each stay 106¹/₂"

Working pressure by rules 203

End plates in steam space:

Material Steel.

Thickness 1¹/₂"Pitch of stays 16¹/₂ x 16"

How are stays secured

Nuts and washers

Working pressure by rules 226.

Material of stays Steel.

Diameter at smallest part 6' 10"

Area supported by each stay 226¹/₂"

Working pressure by rules 280.

Material of Front plates at bottom

Steel.

Thickness 1¹/₂"

Material of Lower back plate Steel.

Thickness 1¹/₂"

Greatest pitch of stays 14 x 9"

Working pressure of plate by rules 220.

Diameter of tubes 3¹/₂"Pitch of tubes 4³/₄ x 4³/₄"

Material of tube plates Steel.

Thickness: Front 1¹/₂"Back 3¹/₂"Mean pitch of stays 9⁵/₈"

Pitch across wide water spaces 14"

Working pressures by rules 202

Girders to Chamber tops: Material Steel.

Depth and

thickness of girder at centre

9¹/₂ x 1¹/₂"

Length as per rule 2-11"

Distance apart 9¹/₂"

Working pressure by rules 198.

Superheater or Steam chest; how connected to boiler

None

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

Yes.

W1125-0090

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. *2012* Description *Vertical Donkey Boiler*
 Made at *London* By whom made *Amos & Smith Ltd.* When made *1910* Where fixed *On board vessel*
 Working pressure *150 lbs* tested by hydraulic pressure to *200 lbs* Date of test *26.9.10* No. of Certificate *26.9.10* Fire grate area *1.5* Description of Safety
 Valves *2* No. of Safety Valves *2* Area of each *1.5* Pressure to which they are adjusted *150 lbs* Date of adjustment *26.9.10*
 If fitted with easing gear *No* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *18 in* Length *4 ft 6 in*
 Material of shell plates *Steel* Thickness *1/2 in* Range of tensile strength *35 tons* Descrip. of riveting long. seams *Double*
 Dia. of rivet holes *1/4 in* Whether punched or drilled *Punched* Pitch of rivets *2 in* Lap of plating *1 in* Per centage of strength of joint *85* Rivets *100*
 Working pressure of shell by rules *150 lbs* Thickness of shell crown plates *1/2 in* Radius of do. *18 in* No. of stays to do. *2* Dia. of stays *1 in*
 Diameter of furnace Top *18 in* Bottom *18 in* Length of furnace *4 ft 6 in* Thickness of furnace plates *1/2 in* Description of joint *Double*
 Working pressure of furnace by rules *150 lbs* Thickness of furnace crown plates *1/2 in* Radius of do. *18 in* Stayed by *2*
 Diameter of uptake *18 in* Thickness of uptake plates *1/2 in* Thickness of water tubes *1/2 in* Dates of survey *26.9.10*

SPARE GEAR. State the articles supplied:— *Two top & two bottom end connecting rod bolts & nuts, two main bearing bolts, one set of coupling bolt & nuts, one set of feed & help pump valves, one main & one donkey feed check valve assorted bolts & nuts etc.*

The foregoing is a correct description, FOR AMOS & SMITH LTD.

Manufacturer.

W. H. H. H.

Managing Director

Dates of Survey while building *1910 - May 4, 11, 14, 17, 18, 21, 24, 26, 28, 30, 31, 1911 - Jan 28, July 14, 12, 15, 19, 22, 25, 28, 30*
 During progress of work in shops *1910 - May 4, 11, 14, 17, 18, 21, 24, 26, 28, 30, 31, 1911 - Jan 28, July 14, 12, 15, 19, 22, 25, 28, 30*
 During erection on board vessel *1910 - May 4, 11, 14, 17, 18, 21, 24, 26, 28, 30, 31, 1911 - Jan 28, July 14, 12, 15, 19, 22, 25, 28, 30*
 Total No. of visits *34*

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

" " " donkey. " " " *yes*

Dates of Examination of principal parts—Cylinders *25.7.10* Slides *22.8.10* Covers *10.8.10* Pistons *4.8.10* Rods *10.8.10*
 Connecting rods *19.7.10* Crank shaft *22.8.10* Thrust shaft *22.8.10* Tunnel shafts *14.7.10* Screw shaft *14.7.10* Propeller *22.7.10*
 Stern tube *14.7.10* Steam pipes tested *13.9.10* Engine and boiler seatings *22.7.10* Engines holding down bolts *8.9.10*
 Completion of pumping arrangements *20.9.10* Boilers fixed *15.9.10* Engines tried under steam *15.9.10*
 Main boiler safety valves adjusted *15.9.10* Thickness of adjusting washers *S 3/4 P 3/4*
 Material of Crank shaft *S* Identification Mark on Do. *676* Material of Thrust shaft *S* Identification Mark on Do. *676*
 Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *14.7.10*
 Material of Steam Pipes *Solid drawn copper* Test pressure *400 lbs*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & boiler of this vessel have been constructed under Special Survey, are of good material & workmanship & have been fitted & secured on board in accordance with the Rules. They are now in good working condition & eligible in my opinion to have record of T.L.M.C. 9-10 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD.

+ LMC 9.10

27/9/10

The amount of Entry Fee *£ 1 : 0 : 0* When applied for. *26.9.10*
 Special *£ 12 : 0 : 0*
 Donkey Boiler Fee *£ 8 : 0 : 0* When received. *30.9.10*
 Travelling Expenses (if any) *£ - : 0 : 0*

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

Committee's Minute

Assigned

+ LMC 9.10