

REPORT ON MACHINERY.

No. 30,379

Received at London Office

Date of writing Report

19

When handed in at Local Office

31/1 10/18 Port of

Hull

WED. 13 FEB. 1918

No. in Survey held at
Reg. Book.

Hull

Date, First Survey 16.7.17

Last Survey

31.1.1918.

on the

Steam Trawler "William Brown."

(Number of Visits 39.

Gross 290
Tons Net 119.

When built 1918.1.

Master

Built at

Beverley

By whom built Cook, Welton & Lunnell

Engines made at

Hull

By whom made

Amos & Smith L^{ds} No. 2928.

when made 1918.1.

Boilers made at

Hull

By whom made

Amos & Smith L^{ds} No. 2928

when made 1918.1.

Registered Horse Power

Owners

British Admiralty

Port belonging to

Nom. Horse Power as per Section 28

87.

Is Refrigerating Machinery fitted for cargo purposes

no.

Is Electric Light fitted no.

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks 3

Dia. of Cylinders

12½" 21" 35"

Length of Stroke

26"

Revs. per minute

110

Dia. of Screw shaft

as per rule 7.56

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

Yes.

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

Length of stern bush 34"

Dia. of Tunnel shaft

as per rule 6.57

Dia. of Crank shaft journals

as per rule 6.9

Dia. of Crank pin

7½"

Size of Crank webs

14" 4½"

Dia. of thrust shaft under

collars 7½"

Dia. of screw

9' 6"

Pitch of Screw

11' 1½"

No. of Blades

4

State whether moreable no.

Total surface

35½ ft.

No. of Feed pumps

2

Diameter of ditto

2½"

Stroke

12"

Can one be overhauled while the other is at work

Yes.

No. of Bilge pumps

2

Diameter of ditto

2½"

Stroke

12"

Can one be overhauled while the other is at work

Yes.

No. of Donkey Engines

Two & 3 ejector

Sizes of Pumps

6" 3" 6" 4" 6"

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

In Engine Room

One 2" For.

One 2" Aft.

One 2" Bi.

In Holds, &c.

One 2" from Fore hold

One 2" from

Slush well.

also separate 2" ejector suction from slush well.

No. of Bilge Injections

1

sizes 3½"

Connected to condenser, or to circulating pump pumps

Is a separate Donkey Suction fitted in Engine room & size

Yes & ejector

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

Forward Suctions.

How are they protected

Good covering.

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.

Is the Screw Shaft Tunnel watertight

Yes.

Is it fitted with a watertight door

Yes.

worked from

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Messrs. Stewarts & Lloyds, L^{ds}

Total Heating Surface of Boilers

1590 ft.

Is Forced Draft fitted

no.

No. and Description of Boilers

One single ended

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

13.12.17

No. of Certificate

3258 & a.

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler

48.75 ft.

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

4.9 ft.

Smallest distance between boilers or uptakes and bunkers or woodwork

8"

Mean dia. of boilers

162"

Length

10' 6" 15"

Material of shell plates

S.

Thickness

3/32"

Range of tensile strength

28.32

Are the shell plates welded or flanged

no.

Descrip. of riveting: cir. seams

Double

long. seams

7.8.2.2.2.2.

Diameter of rivet holes in long. seams

1 5/32"

Pitch of rivets

8"

Lap of plates or width of butt straps

17"

Per centages of strength of longitudinal joint

rivets 89.3

plate 85.5

Working pressure of shell by rules

180'

Size of manhole in shell

16" 12"

Size of compensating ring

9" 1 3/32"

No. and Description of Furnaces in each boiler

3 plain

Material

S.

Outside diameter

40 7/16"

Length of plain part

top 81 1/2"

Thickness of plates

crown 25/32"

Description of longitudinal joint

Welded

No. of strengthening rings

Yes.

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

S.

Thickness: Sides

1/16"

Back

2 1/32"

Top

1/16"

Pitch of stays to ditto: Sides

9 1/2" 9 3/8"

Back

9" 9"

Top

9 1/2" 9 1/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

181

Material of stays

S.

Area at smallest part

2.07

Area supported by each stay

90.25

Working pressure by rules

206

End plates in steam space:

S.

Material

S.

Thickness

1/16"

Pitch of stays

17 3/8" 17"

How are stays secured

S. R. Y. H.

Working pressure by rules

181

Area at smallest part

6.10

Area supported by each stay

295

Working pressure by rules

215

Material of Front plates at bottom

S.

Thickness

3/32"

Material of Lower back plate

S.

Thickness

5/16"

Greatest pitch of stays

14" 9"

Working pressure of plate by rules

219

Diameter of tubes

3 1/2"

Pitch of tubes

5" 4 3/4"

Material of tube plates

S.

Thickness: Front

3/32"

Back

7/8"

Pitch across wide water spaces

14"

Working pressures by rules

184

Girders to Chamber tops: Material

S.

Depth and

Number and pitch of stays in each

Two 9 1/2"

thickness of girder at centre

8 1/2" 1 1/4"

Length as per rule

32"

Distance apart

9 1/2"

% of strength of joint

Yes.

Working pressure by rules

197

Steam dome: description of joint to shell

Yes.

Diameter

Yes.

Thickness of shell plates

Yes.

Material

Yes.

Description of longitudinal joint

Yes.

Diam. of rivet holes

Yes.

Pitch of rivets

Yes.

Working pressure of shell by rules

Yes.

Crown plates

Yes.

Thickness

Yes.

How stayed

Yes.

SUPERHEATER.

Type

Yes.

Date of Approval of Plan

Yes.

Tested by Hydraulic Pressure to

Lloyd's Register

Date of Test

Yes.

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Yes.

Diameter of Safety Valve

Yes.

Pressure to which each is adjusted

Yes.

Is Easing Gear fitted

Yes.

014253-014262-0149

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied: Four top end bolts and nuts, two bottom end bolts and nuts, two main bearing bolts and nuts, one set of coupling bolts and nuts, one set of Air, feed and bilge pump valves, one set of piston studs and nuts. Four condenser tubes, three boiler tubes, one escape valve spring each size, two donkey pump suction and delivery valves, one impeller and shaft for circulating pump, a quantity of assorted bolts and nuts and iron of various sizes.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

A. J. Robinson

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1917: - Jul 16, Aug 13, 22, 24, 27 Sep 5, 10, 13, 21, 26, 29 Oct 5, 11, 12, 15, 22, 24, 30 Nov 2, 7, 16.
During erection on board vessel - 17, 21, 23, 24 Dec 3, 7, 8, 11, 12, 13, 19, 1918: - Jan 15, 14, 18, 19, 23, 28, 31.
Total No. of visits 39.

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts - Cylinders 22.10.17. Slides 29.11.17. Covers 22.10.17. Pistons 30.10.17. Rods 29.11.17. Connecting rods 30.10.17. Crank shaft 15.10.17. Thrust shaft 26.9.17. Tunnel shafts ✓ Screw shaft 26.9.17. Propeller 26.9.17. Stern tube 5.10.17. Steam pipes tested 9.1.18 Engine and boiler seatings 5.10.17. Engines holding down bolts 19.12.17. Completion of pumping arrangements 19.1.18 Boilers fixed 1.1.18 Engines tried under steam 19.1.18 Completion of fitting sea connections 5.9.17 Stern tube 5.9.17 Screw shaft and propeller 5.9.17. Main boiler safety valves adjusted 19.1.18 Thickness of adjusting washers P. $\frac{3}{8}$ " S. $\frac{3}{8}$ " Material of Crank shaft Iron Identification Mark on Do. 2037 F.L.S. Material of Thrust shaft Iron Identification Mark on Do. 2028 F.L.S. Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 2029 F.L.S. Material of Steam Pipes S.D. Copper Test pressure 360 lbs. Is an installation fitted for burning oil fuel no. Is the flash point of the oil to be used over 150°F. ✓ Have the requirements of Section 49 of the Rules been complied with Yes. Is this machinery duplicate of a previous case no. If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been constructed under special survey in accordance with approved plans and the rules of this Society, the material and workmanship are good, the Boiler and steam pipes have been tested as above and found sound and good. The machinery has been properly fitted and secured on board the vessel and on completion tested under full power for two hours as required by the Admiralty and found satisfactory. The safety valves have been adjusted under steam and tested for accumulation which did not exceed 190 lbs.

In our opinion the vessel is eligible for the record L.M.C. 1.18.

It is submitted that this vessel is eligible for THE RECORD. + LMC 1.18.

JWD.

15/2/18.

Geo. Allan Frank L. Linger.
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 2 : 0 : When applied for, 12/2/18.
Special ... £ 26 : 2 :
Donkey Boiler Fee ... £ : : When received, 6
Travelling Expenses (if any) £ : 2 : 22.2.1918. 25.2.18

Committee's Minute

FRI. 15 FEB. 1918

Assigned

+ L.M.C. 1.18.



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