

Rpt. 4.

REPORT ON MACHINERY

No. 30844

Received at London Office

WED. DEC. 18. 1913

Date of writing Report

to

When handed in at Local Office

17/12 1918 Port of Hull.

No. in Survey held at

Date, First Survey

23/5/18

Last Survey

1918

Reg. Book.

(Number of Visits 34)

Gross 290

Net 127

Master

Built at Beverley

By whom built Cook Welton & Gemmell

When built 1918.

Engines made at

Hull

By whom made

Amos & Smith (2958)

when made 1918

Boilers made at

Hull

By whom made

Charles S B Co. Ltd (nr. 2958)

when made 1918

Registered Horse Power

Owners

British Admiralty

Port belonging to

Nom. Horse Power as per Section 28

87 86

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

12 1/2 x 21 x 35

Length of Stroke

26

Revs. per minute

Dia. of Screw shaft

as per rule 7.57

Material of

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

Yes

Length of stern bush

34

Dia. of Tunnel shaft

as per rule 6.58

Dia. of Crank shaft journals

as per rule 6.956.91

Dia. of Crank pin

7 1/8

Size of Crank webs

14 x 4 1/2

Dia. of thrust shaft under

collars

7 1/8

Total surface

35 1/2 sq. ft.

No. of Feed pumps

2

Diameter of ditto

2 1/2

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

2 1/2

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2 & 3 ejector

Sizes of Pumps

6 x 3 x 6 & 6 x 4 x 6

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

In Engine Room

One 2" Engine Room 2" aft & one 2" fore

In Holds, &c.

One 2" forehold one 2" slush well also

2" ejector suction from well.

No. of Bilge Injections

one size 3 1/2

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

2" 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

Yes

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

Yes

Are they Valves or Cocks

Valves & Cocks.

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

Wood Casings.

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

Port Dalbot Steel Co. Ltd - Port Dalbot.

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Port Dalbot Steel Co. Ltd - Port Dalbot.

Total Heating Surface of Boilers

1590 sq. 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

24/10/18

No. of Certificate

3328

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

48.75 sq. ft.

No. and Description of Safety Valves

No.

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

7"

Mean dia. of boilers

162

Length

10' 6 7/8"

Material of shell plates

Steel

Thickness

1 3/32"

Range of tensile strength

28/32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

double

T.R.D.B.S. Diameter of rivet holes in long. seams

1 5/32"

Pitch of rivets

8"

Lap of plates or width of butt straps

17"

Percentage of strength of longitudinal joint

89.3

Working pressure of shell by rules

182 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

9" x 1 3/32"

No. and Description of Furnaces in each boiler

3 plain

Material

Steel

Outside diameter

40 9/16"

Length of plain part

top 8 1/2"

Thickness of plates

crown 2 5/32"

Description of longitudinal joint

Welded

No. of strengthening rings

—

Working pressure of furnace by the rules

188 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

1/16"

Back

2 1/32"

Top

1/16"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 1/2" x 9 3/8"

Back

9" x 9"

Top

9 1/2" x 9 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

182

Material of stays

steel

Area at smallest part

2.070"

Area supported by each stay

90.250"

Working pressure by rules

206

End plates in steam space:

—

Material

Steel

Thickness

1 1/16"

Pitch of stays

17 3/8" x 17"

How are stays secured

DN & W

Working pressure by rules

181 lbs

Material of stays

Steel

Area at smallest part

6' 10"

Area supported by each stay

2950"

Working pressure by rules

215 lbs

Material of Front plates at bottom

steel

Thickness

3 1/2"

Material of Lower back plate

steel

Thickness

1 5/16"

Greatest pitch of stays

14" x 9"

Working pressure of plate by rules

219 lbs

Diameter of tubes

3 1/2"

Pitch of tubes

5" x 4 3/4"

Material of tube plates

steel

Thickness: Front

3 1/2"

Back

7/8"

Mean pitch of stays

10"

Pitch across wide water spaces

14"

Working pressures by rules

182 lbs

Girders to Chamber tops: Material

Steel

Depth and

—

thickness of girder at centre

8 1/2" x 1 3/4"

Length as per rule

32"

Distance apart

9 1/2"

Number and pitch of stays in each

two 9 1/2"

Working pressure by rules

197 lbs

Steam dome: description of joint to shell

—

% of strength of joint

—

Diameter

—

Thickness of shell plates

—

Material

—

Description of longitudinal joint

—

Diam. of rivet holes

—

Pitch of rivets

—

Working pressure of shell by rules

—

Crown plates

—

Thickness

—

How stayed

—

SUPERHEATER. Type

—

Date of Approval of Plan

—

Tested by Hydraulic Pressure to

—

Date of Test

—

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

—

Is Easing Gear fitted

—

Diameter of Safety Valve

—

Pressure to which each is adjusted

—

—

—

—

—

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two top & two bottom end bolts & nuts, one set coupling bolts & nuts, two main bearing bolts & nuts, one set each of Air Bed & Bilge Pump valves, one set piston studs & nuts, three condenser tubes, three boiler tubes, one each escape valve springs, two donkey pump suction & delivery valves, a quantity of assorted bolts & nuts & a variety of assorted sizes.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

A. Buckenbury

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1918. May 23, Jun 3, 4, 14, Jul 8, 9, 15, 19 Aug 12, 21, 23, 28, Sep 10, 14, 17, 19, 23, 27, 30, 30
During erection on board vessel - - Oct 4, 7, 8, 14, 24, 25, Nov 7, 8, 13, 21, 28, 30 Dec: 2
Total No. of visits 34.

Is the approved plan of main boiler forwarded herewith?

Yes

Dates of Examination of principal parts—Cylinders 15/8/18 Slides 28/8/18 Covers 28/8/18 Pistons 28/8/18 Rods 8/7/18
Connecting rods 18/7/18 Crank shaft 8/10/18 Thrust shaft 8/10/18 Tunnel shafts ✓ Screw shaft 8/6/18 Propeller 23/5/18

Stern tube 23/5/18 Steam pipes tested 8/11/18 Engine and boiler seatings 13/6/18 Engines holding down bolts 13/11/18.

Completion of pumping arrangements 28/11/18 Boilers fixed 21/11/18 Engines tried under steam 21/11/18

Completion of fitting sea connections 6/6/18 Stern tube 6/6/18 Screw shaft and propeller 13/6/18

Main boiler safety valves adjusted 2/11/18 Thickness of adjusting washers P $\frac{3}{32}$ " S $\frac{9}{32}$ "

Material of Crank shaft *iron* Identification Mark on Do. *2204 GPW 8/10/18* Material of Thrust shaft *iron* Identification Mark on Do. *2205 GPW 8/10/18*

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *iron* Identification Marks on Do. *1887 JR 8/6/18*

Material of Steam Pipes *Copper (solid drawn)* Test pressure 360 lbs.

Is an installation fitted for burning oil fuel ✓ 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 ✓

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *"William Caldwell"*

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 the approved plans & the Rules of the Society. The materials & workmanship are good. The Boiler & Steam Pipes have been tested as above & found sound & good. The Machinery has been properly fitted & secured on board the vessel & on completion was tested @ full power for two hours as required by the Admiralty & found satisfactory. The safety valves have been adjusted under steam & accumulation did not exceed 6 lbs.

In my opinion the vessel is eligible for the record + L.M.C. 12.18

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 12.18.

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for

Special ... £ 26 : 2 : 0 17/12/18

Donkey Boiler Fee ... £ : : : When received.

Travelling Expenses (if any) £ : : : 19.12.18

Committee's Minute

Assigned

FRI DEC 20 1918

24/12/18

+ L.M.C. 12.18

1918

1918



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Lloyd's Register Foundation

Hull

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.