

Rpt. 4.

REPORT ON MACHINERY.

No. 30436

Received at London Office

MON. 25 MAR. 1918

Date of writing Report

19

When handed in at Local Office

18/3

to 18 Port of

Hull

No. in Survey held at
Reg. Book.

Hull

Date, First Survey

4.9.17

Last Survey

11.3

1918.

on the Steam Trawler

Richard Bacon

(Number of Visits 44)

Gross 290

Net 119

When built 1918

Master

Built at

Beverley

By whom built

Cook, Welton & Lunnell

Engines made at

Hull

By whom made

Amos & Smith L^{ds}

2931

when made

1918.3.

Boilers made at

Hull

By whom made

Amos & Smith L^{ds}

2931

when made

1918.3.

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

12 1/2" 21" 35"

Length of Stroke

26"

Revs. per minute

114

Dia. of Screw shaft

as per rule 7.56
as fitted 7.58

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

✓

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
as fitted 6.34

Dia. of Crank shaft journals

as per rule 6.9
as fitted 7.8

Dia. of Crank pin

7 1/8"

Size of Crank webs

14" 4 1/16"

Dia. of thrust shaft under

collars

7 1/8"

Dia. of screw

9" 6"

Pitch of Screw

11" 1 1/2"

No. of Blades

4

State whether moveable

no

Total surface

35 1/2 sq

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" 3" 6" & 6" 4" 6"

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

In Engine Room One - 2" For. One - 2" Afr. & one 2" Bilge Afr. 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 3 1/2"

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 suction

How are they protected

Wood 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

✓

Is it fitted with a watertight door

✓

worked from

✓

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Messrs John Spencer & Sons L^{ds}

Total Heating Surface of Boilers

1590 sq

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

3.1.18

No. of Certificate

3263 G.A.

Can each boiler be worked separately

✓

Area of fire grate in each boiler

48.75 sq

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

4.9 sq

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

8"

Int.

Mean dia. of boilers

16 1/2"

Length

10' 6 1/8"

Material of shell plates

S.

Thickness

1 3/32"

Range of tensile strength

28.32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

7.9.2.2.2.2.

Diameter of rivet holes in long. seams

1 1/32"

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 1/32"

No. and Description of Furnaces in each boiler

3 plain

Material

S.

Outside diameter

40 1/16"

Length of plain part

top 8 1/2"
bottom 7 1/2"

Thickness of plates

crown 25/32
bottom 25/32

Description of longitudinal joint

Welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

S.

Thickness: Sides

1/16"

Back

2 1/2"

Top

1/16"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 1/2" 9 1/8"

Back

9" 9"

Top

9 1/2" 9 1/8"

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:

Material

S.

Thickness

1/16"

Pitch of stays

17 1/8" 17"

How are stays secured

D.N. & W.

Working pressure by rules

181

Material of stays

S.

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 1/32"

Material of Lower back plate

S.

Thickness

15/16"

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 1/32"

Back

7/8"

Mean pitch of stays

10"

Pitch across wide water spaces

14"

Working pressures by rules

184

Girders to Chamber tops: Material

S.

Depth and

thickness of girder at centre

8 1/2"

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

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 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.

W. R. Chubb

Manufacturer.

Dates of Survey while building

During progress of work in shops --
During erection on board vessel --
Total No. of visits

1917:— Sep. 4. 10. 13. 21. 26. 29. Oct. 5. 11. 12. 15. 22. 24. 30. 31. Nov. 7. 8. 9. 17. 21. 23. 29. Dec. 3. 7. 14. 15. 21. 29. 1918:— Jan. 2. 3. 10. 11. 16. 21. 22. Feb. 1. 4. 6. 12. 13. 14. 23. Mar. 8. 11

Is the approved plan of main boiler forwarded herewith? *Yes*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 30.11.17. Slides 7.12.17. Covers 30.11.17. Pistons 7.12.17. Rods 30.11.17. Connecting rods 7.12.17. Crank shaft 2.1.18. Thrust shaft 3.1.18. Tunnel shafts ✓. Screw shaft 31.10.17. Propeller 31.10.17. Stern tube 30.10.17. Steam pipes tested 13.2.18. Engine and boiler seatings 31.10.17. Engines holding down bolts 6.2.18. Completion of pumping arrangements 23.2.18. Boilers fixed 6.2.18. Engines tried under steam 23.2.18. Completion of fitting sea connections 7.11.17. Stern tube 7.11.17. Screw shaft and propeller 7.11.17. Main boiler safety valve adjusted 23.2.18. Thickness of adjusting washers P. $\frac{3}{8}$ " S. $\frac{3}{8}$ ". Material of Crank shaft Iron Identification Mark on Do. 1846 G.A. Material of Thrust shaft Iron Identification Mark on Do. 1847 G.A. Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 2053 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? Yes ✓ If so, state name of vessel "William Brown" (Castle Glass.)

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 and the rules of this Society. The materials 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 was 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. 3.18.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.18.

W.D. J.R.
25/3/18

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

The amount of Entry Fee ... £ 2 : - :
Special ... £ 26 : 2 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 20/3/1918.
When received, 21/3/1918.

Committee's Minute

TUE. MAR. 26 1918.

Assigned

+ LMC 3.18

MACHINERY CERTIFICATE WRITTEN



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