

REPORT ON MACHINERY

No. 30632

Received at London Office

TUE. 30 JUL. 1918

Date of writing Report

19

When handed in at Local Office

29.7.18 Port of Hull

No. in Survey held at
Reg. Book.

Hull

Date, First Survey

23/11/17

Last Survey

26.7.1918.

on the

John Bonkworth

(Number of Visits

47

Master

Built at

Beverley

By whom built

Cook, Welton, & Gemmell

Tons

Gross

290

Net

127

When built

1918

Engines made at

Hull

By whom made

Amos & Smith Ltd (No 2943)

when made

1918

Boilers made at

Hull

By whom made

Amos & Smith Ltd (No 2943)

when made

1918

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" x 21" x 35"

Length of Stroke

26"

Revs. per minute

109

Dia. of Screw shaft

as per rule

7.56"

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

✓

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"

Dia. of Crank shaft journals

as per rule

6.9"

Dia. of Crank pin

7½"

Size of Crank webs

14" x 4½"

Dia. of thrust shaft under

collars

7½"

Dia. of screw

9-6"

Pitch of Screw

11-1½"

No. of Blades

4

State whether moveable

No

Total surface

35½ sq

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 Engine

2 + 3 injectors

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" forward, one 2" aft, & one 2" bilge aft

In Holds, &c. one 2" from fore hold, one 2" from stush

well, also separate 2" ejector suction from stush well

No. of Bilge Injections

1

size 3½"

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

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

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

John Spencer and Sons Limited

Total Heating Surface of Boiler

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

14/6/18

No. of Certificate

8299

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

Smallest distance between boilers or uptakes and bunkers or woodwork

9¾"

INT

dia. of boilers

162"

Length

10-6½"

Material of shell plates

steel

Thickness

1/32"

Range of tensile strength

28/32 Tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

double

long. seams

TR DBS

Diameter of rivet holes in long. seams

1/32"

Pitch of rivets

8"

Gap of plates or width of butt straps

14"

Per centages of strength of longitudinal joint

rivets

89.3

plate

85.5

Working pressure of shell by rules

180 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

9" x 1/32"

No. and Description of Furnaces in each boiler

3 plain

Material

steel

Outside diameter

40 9/16"

Length of plain part

top

81½"

Thickness of plates

crown

25"

Description of longitudinal joint

Welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

steel

Thickness: Sides

1/16"

Back

21/32"

Top

1/16"

Bottom

7/8"

Pitch of stays to ditto: Sides

9½" x 9½"

Back

9" x 9"

Top

9½" x 9½"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

181

Material of stays

steel

Area at smallest part

2.07 sq

Area supported by each stay

90.25 sq

Working pressure by rules

206

End plates in steam space:

Material

steel

Thickness

1/16"

Area at smallest part

6.10 sq

Area supported by each stay

295 sq

Working pressure by rules

215

Material of Front plates at bottom

steel

Thickness

31/32"

Material of Lower back plate

steel

Thickness

15/16"

Greatest pitch of stays

14" x 9"

Working pressure of plate by rules

219

Diameter of tubes

3½"

Pitch of tubes

5" x 4¾"

Material of tube plates

steel

Thickness: Front

31/32"

Back

7/8"

Mean pitch of stays

10"

Pitch across wide water spaces

14"

Working pressures by rules

184 lbs

Girders to Chamber tops: Material

steel

Depth and

16

Thickness of girder at centre

8½" x 1¾"

Length as per rule

32"

Distance apart

9½"

Number and pitch of stays in each

Two

9½"

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

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

Pressure to which each is adjusted

Is Easing Gear fitted

Date of Test

Diameter of Safety Valve

Foundation

Foundation

Foundation

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IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied: *Two top end bolts and nuts, Two bottom end bolts and nuts, one set of coupling bolts and nuts, Two main bearing bolts and nuts, one set of air, feed, and bilge pump valves, one set of piston studs and nuts. Three condenser tubes, Three boiler tubes. One escape valve spring each side. Two donkey pump suction and delivery valves, and a quantity of assorted bolts and nuts, and iron of various sizes*

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

J. Brackenhury

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1917: - Nov 23 Dec 3. 15 Feb 1. 21 Mar 6. 15 22 Apr 2. 11 18. 23 27 May 2. 8. 15 22 28 29. 30 Jun 4
During erection on board vessel - - - 5. 6. 7. 11. 12. 13. 14. 15 17. 18. 19. 20. 21. 25. 26. 28. Jul 3. 8. 10. 11. 12. 15. 17. 18. 22. 26.
Total No. of visits 47

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

Dates of Examination of principal parts—Cylinders *4/6/18* Slides *4/6/18* Covers *4/6/18* Pistons *4/6/18* Rods *5/6/18*
Connecting rods *5/6/18* Crank shaft *11/6/18* Thrust shaft *5/6/18* Tunnel shafts *✓* Screw shaft *23/4/18* Propeller *23/4/18*
Stern tube *23/4/18* Steam pipes tested *12/7/18* Engine and boiler seatings *26/6/18* Engines holding down bolts *10/7/18*
Completion of pumping arrangements *22/7/18* Boilers fixed *15/7/18* Engines tried under steam *18/7/18*
Completion of fitting sea connections *23/4/18* Stern tube *23/4/18* Screw shaft and propeller *23/4/18*
Main boiler safety valves adjusted *18/7/18* Thickness of adjusting washers *P 13/32 S 3/8*

Material of Crank shaft *Iron* Identification Mark on Do. *1889 JR* Material of Thrust shaft *Iron* Identification Mark on Do. *1886 JR*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shaft *Iron* Identification Marks on Do. *1872 PF*

Material of Steam Pipes *SD Copper* Test pressure *360 lbs 12/7/18*

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 *John Baptist*

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 the 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 at 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 188 lbs

In my opinion the vessel is eligible for the record + LMC 7-18

It is submitted that this vessel is eligible for THE RECORD + LMC 7-18.

The amount of Entry Fee ... £ *2* : : When applied for, *27.7 1918*
Special ... £ *26* : *2* :
Donkey Boiler Fee ... £ : : When received, *29.7 1918*
Travelling Expenses (if any) £ : :

Committee's Minute

Assigned

FRI. 2-AUG. 1918

+ R. H. O. 7-18

P. Fitzgerald

John Robertson
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation