

Received at London Office 18 AUG. 1917

Date of writing Report 25-7-17 19 When handed in at Local Office 2-8-17 Port of Hull  
No. in Survey held at Hull Date, First Survey 15-9-16 Last Survey 30-7-17 19  
Reg. Book. on the steel screw tug "Robert Beton" (Number of Visits 38)  
Master Built at Beverley By whom built Cook, Welton & Gemmell When built 1917-7  
Engines made at Hull By whom made Ames & Smith L<sup>d</sup> 102917 when made 1917-7  
Boilers made at Hull By whom made C. D. Holmes & Co L<sup>d</sup> 101173 when made 1917-7  
Registered Horse Power Owners British Admiralty Port belonging to  
Nom. Horse Power as per Section 28 81 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks 3  
Dia. of Cylinders 12½"-21½"-35½" Length of Stroke 24" Revs. per minute 116 Dia. of Screw shaft as per rule 7¼" 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 2'-9"  
Dia. of Tunnel shaft as per rule 6.58" Dia. of Crank shaft journals as per rule 6.91" Dia. of Crank pin 7¼" Size of Crank webs 14½" x 4½" Dia. of thrust shaft under  
collars 7½" Dia. of screw 9'-0" Pitch of Screw 11'-3" No. of Blades 4 State whether moveable no Total surface 31.54  
No. of Feed pumps one Diameter of ditto 2¾" Stroke 12" Can one be overhauled while the other is at work  
No. of Bilge pumps one Diameter of ditto 2¾" Stroke 12" Can one be overhauled while the other is at work  
No. of Donkey Engines one 43 gals Sizes of Pumps 6¼", 4¾" x 6" dup No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room Two 2" dia In Holds, &c. one 2" dia in each compartment  
all suction also connected to ejector  
No. of Bilge Injections one sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 3" 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 strong 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 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel J. Spencer & Sons  
Total Heating Surface of Boilers 1402 Is Forced Draft fitted no No. and Description of Boilers one single ended  
Working Pressure 195 Tested by hydraulic pressure to 390 Date of test 9-5-17 No. of Certificate 3211  
Can each boiler be worked separately Area of fire grate in each boiler 43.2 No. and Description of Safety Valves to  
each boiler two spring loaded Area of each valve 4.9 Pressure to which they are adjusted 200 Are they fitted with easing gear yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 8" 3/4 lagging Mean dia. of boilers 162" Length 10'-6" Material of shell plates steel  
Thickness 3/16 Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double  
long. seams J.R.D.B. Diameter of rivet holes in long. seams 17/32 Pitch of rivets 8 7/16 Lap of plates or width of butt straps 16 5/8  
Per centages of strength of longitudinal joint rivets 86.8 plate 85.5 Working pressure of shell by rules 197 Size of manhole in shell 16 x 12  
Size of compensating ring 7" x 3/16 No. and Description of Furnaces in each boiler three plain Material steel Outside diameter 40"  
Length of plain part top 69 3/4 bottom 43 Thickness of plates crown 2 2/32 Description of longitudinal joint welded No. of strengthening rings  
Working pressure of furnace by the rules 205 Combustion chamber plates: Material steel Thickness: Sides 11/16 Back 23/32 3/16 Top 11/16 Bottom 11/16  
Pitch of stays to ditto: Sides 9 3/4 x 8 Back 9 3/4 x 8 W 10 x 8 W If stays are fitted with nuts or riveted heads nuts Working pressure by rules 202  
Material of stays steel Area at smallest part 2.07 Area supported by each stay 86 Working pressure by rules 215 End plates in steam space:  
Material steel Thickness 15/32 Pitch of stays 18" x 18" How are stays secured 8.79 W Working pressure by rules 195 Material of stays steel  
Area at smallest part 6.33 Area supported by each stay 324 Working pressure by rules 203 Material of Front plates at bottom steel  
Thickness 7/8 Material of Lower back plate steel Thickness 31/32 Greatest pitch of stays 15" x 9 1/2 Working pressure of plate by rules 207  
Diameter of tubes 3 1/2 Pitch of tubes 4 3/4 Material of tube plates steel Thickness: Front 2 1/4 + 3/4 Back 7/8 Mean pitch of stays 9 1/2  
Pitch across wide water spaces 15 Working pressures by rules 250 Girders to Chamber tops: Material steel Depth and  
thickness of girder at centre 10 3/4 x 1 3/4 Length as per rule 35.8 Distance apart 11 Number and pitch of stays in each Three 8"  
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  
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

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WT6-0147



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *✓*

SPARE GEAR.

State the articles supplied:—

*Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of air feed & bilge pump valves, one main & one donkey feed check valve, two donkey pump valves, 6 junk ring studs & nuts, one safety valve spring, one set of fire bars, three condenser tubes & a quantity of bolts & nuts & nuts of various sizes.*

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

*W. Peachbury*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1916. Sept 15, Oct 17, 18, 31, Nov 13, 24, Dec 15, 24, 28, Apr 23, 17, 28, 30, May 5, 7, 9, 12, 14, 23, 24, Jun 2, 4, 9*  
{ During erection on board vessel -- } *15, 22, 25, 27, 28, Jul 2, 3, 4, 13, 14, 23, 28, 30*  
Total No. of visits *38*

Is the approved plan of main boiler forwarded herewith *Forwarded with*

" " " donkey " " *John Burlingham*

Dates of Examination of principal parts—Cylinders *5-5-17* Slides *2-6-17* Covers *5-5-17* Pistons *5-5-17* Rods *5-5-17*

Connecting rods *9-6-17* Crank shaft *2-6-17* Thrust shaft *24-5-17* Tunnel shafts *✓* Screw shaft *17-4-17* Propeller *17-4-17*

Stern tube *17-4-17* Steam pipes tested *4-7-17* Engine and boiler seatings *21-4-17* Engines holding down bolts *28-6-17*

Completion of pumping arrangements *23-7-17* Boilers fixed *28-6-17* Engines tried under steam *28-7-17*

Completion of fitting sea connections *21-4-17* Stern tube *21-4-17* Screw shaft and propeller *21-4-17*

Main boiler safety valves adjusted *14-7-17* Thickness of adjusting washers *PT 5 7/16*

Material of Crank shaft *Iron* Identification Mark on Do. *1815 GA* Material of Thrust shaft *Iron* Identification Mark on Do. *1810 GA*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *1814 GA*

Material of Steam Pipes *Solid drawn copper* Test pressure *140*

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 *✓*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *John Burlingham*

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 this Society, the materials & workmanship are good. The Boiler & steam pipes have been tested by hydraulic pressure as above & found sound & good. The Machinery has been properly fitted & secured on board & on completion was tried under full power for two hours as required by the Admiralty & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 205 lbs. In our opinion the vessel is eligible for the record + L.M.C. 7.17*

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 7.17.

The amount of Entry Fee ... £ 1 : 0 :  
Special ... £ 24 : 6 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : 1/6 :

When applied for,

17-8-1917

When received,

31/8/17

*Frank A. Sturgeon & G. Allan (per P.F.)*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 21 AUG. 1917

Assigned

*+ L.M.C. 7.17*



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