

REPORT ON MACHINERY.

No. 30999

Date of writing Report 19 When handed in at Local Office 3/4 1919 Port of Hull
No. in Survey held at Hull Date, First Survey 25/2/18 Last Survey 29-3 1919
Reg. Book. on the steel screw tug "St Botolph" (Regum type) (Number of Visits 90)
Master J. L. White Built at Hull By whom built Rivington Hooper Tons (Gross 444 (Net 8.23)
Engines made at Hull By whom made Earle & Co Ltd when made 1919
Boilers made at Hull By whom made Earle & Co Ltd when made 1919
Registered Horse Power Owners British Admiralty Port belonging to
Nom. Horse Power as per Section 28 20P Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 18 1/4" - 28 1/2" - 48 1/2" Length of Stroke 28" Revs. per minute 126 Dia. of Screw shaft as per rule 9.64" Material of steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube no 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 no liners Length of stern bush 42"
Dia. of Tunnel shaft as per rule 8.82" Dia. of Crank shaft journals as per rule 8.95" Dia. of Crank pin 9" Size of Crank webs 16 1/2" x 6 1/2" Dia. of thrust shaft under
collars 9" Dia. of screw 10-7" Pitch of Screw 12-0 No. of Blades 4 State whether moveable no Total surface 342 sq ft
No. of Feed pumps two Diameter of ditto 3 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work yes
No. of Bilge pumps two Diameter of ditto 3 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work yes
No. of Donkey Engines two 1 1/2" gals Sizes of Pumps 1.6, 4 1/2" x 6 duplex No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room one 2 1/2" in Engine room one 2 1/2" in Boiler room In Holds, &c. one 3" in fore & after peaks one 2" in
each compartment— all suction connected to yacht & valves operated from deck
No. of Bilge Injections one sizes 6" Connected to condenser to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 2 1/2"
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 no
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 one exhaust & atmosphere How are they protected strong casing
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 worked from

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Port Talbot for plates J. Spencer & Son for staybars.
Total Heating Surface of Boilers 3384 sq ft Is Forced Draft fitted yes No. and Description of Boilers two single ended
Working Pressure 180 lb Test by hydraulic pressure to 240 lb Date of test 23-8-12 No. of Certificate 8812 F
Can each boiler be worked separately yes Area of fire grate in each boiler 43.5 sq ft No. and Description of Safety Valves to
each boiler two spring loaded Area of each valve 7.5 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear yes
Smallest distance between boilers on uptakes and bunkers or woodwork 12" Mean dia. of boilers 130" Length 11'-0" Material of shell plates steel
Thickness 1 1/2" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
long. seams Y.R.B.B. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 3/8" Lap of plates or width of butt straps 16"
Per centages of strength of longitudinal joint rivets 88.4 Working pressure of shell by rules 182 Size of manhole in shell 20 x 16"
Size of compensating ring 9 1/2" x 1 1/2" No. and Description of Furnaces in each boiler three horizontal Material steel Outside diameter 39 1/2"
Length of plain part top bottom Thickness of plates crown 1 1/2" Description of longitudinal joint welded No. of strengthening rings 4
Working pressure of furnace by the rules 192 Combustion chamber plates: Material steel Thickness: Sides 2 1/32 Back 2 1/32 Top 2 1/32 Bottom 3 1/32
Pitch of stays to ditto: Sides 9 x 8" Back 9 1/2 x 8 1/2" Top 8 1/2 x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 200
Material of stays steel Area at smallest part 1.76 sq in Area supported by each stay 74 sq in Working pressure by rules 190 End plates in steam space:
Material steel Thickness 1 1/2" Pitch of stays 18 x 18" How are stays secured 8 x 8" Working pressure by rules 185 Material of stays steel
Area at smallest part 6.22 sq in Area supported by each stay 3.24 sq in Working pressure by rules 199 Material of Front plates at bottom steel
Thickness 1 5/16" Material of Lower back plate steel Thickness 2 7/32" Greatest pitch of stays 14 x 8 1/2" Working pressure of plate by rules 188
Diameter of tubes 2 1/2" Pitch of tubes 3 7/8 x 3 1/4" Material of tube plates steel Thickness: Front 1 5/16" Back 2 3/32" Mean pitch of stays 8 3/8"
Pitch across wide water spaces 13 1/2" Working pressures by rules 185 Girders to Chamber tops: Material steel Depth and
thickness of girder at centre 7 1/2" x 1 3/4" Length as per rule 30 1/2" Distance apart 8 3/4" Number and pitch of stays in each two 8 1/2"
Working pressure by rules 184 Steam dome: description of joint to shell yes % of strength of joint 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 yes
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

012108-012112-0134

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— 2 Con rod top end, 2 Con rod bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 pair ecc strap bolts & nuts, 6 coupling bolts & nuts, 2 bilge & 2 feed pump valves, 2 cwt of assorted bolts & nuts, 24 assorted bars of iron & steel, 2 safety valve springs, 1 air pump rod, 1 set of springs & rings for each piston, 4 escape valve springs, 24 plain & 4 stay boiler tubes, 1 set thrust collars complete, eccentric rod & strap, 1 set main bearing brasses &c.

The foregoing is a correct description,

SHIPBUILDING & ENGINEERING CO. LIMITED

Manufacturer.

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits

1918 Feb. 25 to 1919 Mar. 29

90

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 9-7-18 Slides 21-8-18 Covers 9-7-18 Pistons 2-8-18 Rods 21-6-18
Connecting rods 21-6-18 Crank shaft 21-6-18 Thrust shaft 12-8-18 Tunnel shafts 17-11-18 Screw shaft 21-8-18 Propeller 27-8-18
Stern tube 6-9-18 Steam pipes tested 7-11-18 Engine and boiler seatings 1-11-18 Engines holding down bolts 14-11-18
Completion of pumping arrangements 24/3/19 Boilers fixed 14-11-18 Engines tried under steam 24/3/19
Completion of fitting sea connections 17-9-18 Stern tube 17-9-18 Screw shaft and propeller 29-10-18
Main boiler safety valves adjusted 29-11-18 Thickness of adjusting washers *For P 7/8 S 3/8 After P 7/16 S 3/8*

Material of Crank shaft *steel* Identification Mark on Do. *850 R. 72* Material of Thrust shaft *steel* Identification Mark on Do. *2146 FLS*
Material of Tunnel shafts *steel* Identification Marks on Do. *2172 FLS* Material of Screw shafts *steel* Identification Marks on Do. *2150 FLS*
Material of Steam Pipes *solid drawn steel & solid drawn copper* Test pressure *540 & 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 ☒

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

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been built under special survey the materials & workmanship are good. On completion the machinery was tried under full working conditions with good results.

The machinery of this vessel is in a good & efficient condition & eligible in our opinion to be classed with the record **LMC. 3.19** marked in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.19 F.D. *APR*

The amount of Entry Fee ... £ : : When applied for,
Special ... £ : : 14/4/19
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : 26.5.19

Committee's Minute

Assigned

5 APR 17 1919

+ LMC 3.19

Frank L. Stanger
Engineer Surveyor to Lloyd's Register of Shipping.



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MACHINERY CERTIFICATE
WRITTEN