

Rpt. 4.

REPORT ON MACHINERY.

No. 79546

Received at London Office

Date of writing Report

19

When handed in at Local Office

9 SEP 1919

Port of Liverpool

No. in Survey held at
Reg. Book.

Lytham

Date, First Survey March 26/18 Last Survey Sept 1st 1919

(Number of Visits 38)

on the steel screw tug 'St Faith'

Tons } Gross 413.9
Net 11.3

Master

Built at Lytham

By whom built Lytham S. & Eng. Co.

When built 1919

Engines made at

Lytham

By whom made

J.C.

when made 1919

Boilers made at

J.C.

By whom made

J.C.

when made 1919

Registered Horse Power

10

Owners

Admiralty

Port belonging to London

Nom. Horse Power as per Section 28

208

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines Vertical Triple ✓ No. of Cylinders 3 ✓ No. of Cranks 3 ✓
Dia. of Cylinders $18\frac{1}{4} + 28\frac{1}{2} + 48\frac{1}{4}$ Length of Stroke 28" Revs. per minute 124 Dia. of Screw shaft as per rule 9.6" Material of screw shaft M.S.
Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners ✓ Is the after end of the liner made water tight
in the propeller boss ✓ 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 3'-6" ✓
Dia. of Tunnel shaft as per rule 6.53" Dia. of Crank shaft journals as per rule 8.96" Dia. of Crank pin 9" Size of Crank webs $16\frac{1}{2} \times 6\frac{1}{2}$ 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 340' ✓
No. of Feed pumps 2 Diameter of ditto $3\frac{1}{8}$ Stroke $13\frac{1}{2}$ Can one be overhauled while the other is at work Yes ✓
No. of Bilge pumps 2 Diameter of ditto $3\frac{1}{8}$ Stroke $13\frac{1}{2}$ Can one be overhauled while the other is at work Yes ✓
No. of Donkey Engines 2 Sizes of Pumps $7\frac{1}{2} \times 15$ Wier; $6 \times 12 \times 6$ ✓ No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room three-2 $\frac{1}{2}$ " ✓ In Holds, &c. A.P. 3", F.P. 3", chain locker 2", fore hold 2" ✓

No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump Yes ✓ Is a separate Donkey Suction fitted in Engine room & size Yes, 2 $\frac{1}{2}$ " ✓
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 Yes ✓
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
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 none ✓ How are they protected ✓
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 none ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Beardmore & Co.

Total Heating Surface of Boilers 3380 Is Forced Draft fitted Yes ✓ No. and Description of Boilers Two S.E. cylindrical ✓
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 14.12.15.19 No. of Certificate 2067/8 ✓
Can each boiler be worked separately Yes ✓ Area of fire grate in each boiler 424 sq ft No. and Description of Safety Valves to
each boiler 2, spring loaded Area of each valve 7.07 sq ft Pressure to which they are adjusted 183 lbs Are they fitted with easing gear Yes ✓
Smallest distance between boilers or uptakes and bunkers or woodwork 1'-2" Mean dia. of boilers 12'-6" Length 11'-0" Material of shell plates steel
Thickness $\frac{1}{32}$ Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R. lap
long. seams T.R. butt Diameter of rivet holes in long. seams $\frac{1}{16}$ Pitch of rivets $7\frac{3}{8}$ Lap of plates or width of butt straps 16"
Per centages of strength of longitudinal joint rivets 87.5 Working pressure of shell by rules 182 Size of manhole in shell 16 x 12
Size of compensating ring $5\frac{1}{2} \times 4 \times \frac{1}{32}$ No. and Description of Furnaces in each boiler 3, corrugated Material M.S. Outside diameter 3-3/4
Length of plain part top 3/16" Thickness of plates crown 3/16" Description of longitudinal joint lap with No. of strengthening rings ✓
Working pressure of furnace by the rules 192 lbs Combustion chamber plates: Material M.S. Thickness: Sides 2/32 Back 2/32 Top 2/32 Bottom 3/4
Pitch of stays to ditto: Sides 8 x 9 Back 8 x 9 Top 8 x 9 If stays are fitted with nuts or riveted heads Yes ✓ Working pressure by rules 200 lbs
Material of stays M.S. Area at smallest part 1.73 sq ft Area supported by each stay 74 sq ft Working pressure by rules 200 End plates in steam space:
Material M.S. Thickness 1/8" Pitch of stays 18 x 16 How are stays secured 2 nuts & washers Working pressure by rules 185 lbs Material of stays M.S.
Area at smallest part 6.33 Area supported by each stay 324 sq ft Working pressure by rules 200 Material of Front plates at bottom M.S.
Thickness 15/16 Material of Lower back plate M.S. Thickness 27/32 Greatest pitch of stays as per plan Working pressure of plate by rules 185
Diameter of tubes 2 1/2 Pitch of tubes 3 3/4 x 3 3/8 Material of tube plates M.S. Thickness: Front 15/16 Back 23/32 Mean pitch of stays 7.68
Pitch across wide water spaces 13 1/2 x 8 1/8 Working pressures by rules 185 lbs Girders to Chamber tops: Material M.S. Depth and
thickness of girder at centre 7 1/2 x 2 @ 7/8 Length as per rule 2-6 1/2 Distance apart 8 3/4 Number and pitch of stays in each 2 @ 8 1/2
Working pressure by rules 182 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

009780-009788-0205

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:— 2 top end, 2 bottom end, 1 2 main bearing bolts & nuts; 1 pair eccentric strap bolts, 6 coupling bolts, 2 bridge & 2 feed pump valves, 1 air pump rod & set of valves, 1 piston rod, 1 slide rod, & piston rings for each type, 1 pair connecting rod brasses, 1 pair main bearing brasses, spare parts for auxiliaries & other items as per specification.

The foregoing is a correct description,

PER PRO
THE LYTHAM SHIPBUILDING
& ENGINEERING CO. LTD.

W. J. Lewis

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1918 Mar 26. Apr 10. 23. May 11. 23. June 3. 13. July 1. 18. 29. Aug 8. Sept 12. 20. 30. Oct 11. 21. 30. Nov 13. 27. Dec 16.
During erection on board vessel --- 1919 Jan 20. Feb 19. 28. Mar 11. 25. Apr 9. May 8. 23. June 6. 23. July 11. 17. 25. Aug 8. 21. 28. Sept 1.
Total No. of visits 38.

Is the approved plan of main boiler forwarded herewith

no

Dates of Examination of principal parts—Cylinders

18/7/18

Slides 20/11/19

Covers 8/8/18

Pistons 8/8/18

Rods 18/7/18

Connecting rods

18/7/18

Crank shaft 30/9/18

Thrust shaft 8/8/18

Tunnel shafts 8/8/18

Screw shaft 27/11/18

Propeller 27/11/18

Stern tube

27/11/18

Steam pipes tested 8.8.19

Engine and boiler seatings 6.6.19

Engines holding down bolts 11.7.19

Completion of pumping arrangements

21.8.19

Boilers fixed 6.6.19

Engines tried under steam

21.8.19

Completion of fitting sea connections

16/12/18

Stern tube

16/12/18

Screw shaft and propeller

16/12/18

Main boiler safety valves adjusted

21.8.19

Thickness of adjusting washers

404. P 7/16. S 3/8. aft 3/8.

Material of Crank shaft

M. S.

Identification Mark on Do. 1187

Material of Thrust shaft

M. S.

Identification Mark on Do. 1187

Material of ~~Tunnel~~ shafts

M. S.

Identification Marks on Do. 1187

Material of Screw shafts

M. S.

Identification Marks on Do. 1187

Material of Steam Pipes

solid drawn copper & steel

Test pressure

360 & 540 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

Rescue tug 'St. Zagan'.

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. The machinery & boilers have been fitted on board in an efficient manner, & tried under steam with satisfactory results, and are now eligible for record of + LMC 9.19.

It is submitted that
this vessel is eligible for
THE RECORD + LMC 9.19. F.D.

W. J. Lewis
15/9/19

The amount of Entry Fee ... £ 4 : .

Special ... £ 60 : 16

Donkey Boiler Fee ... £ : .

Travelling Expenses (if any) £
(£8.8.3. Inclusive fee).

Committee's Minute

Assigned

When applied for, 19/9/19

When received, 29/10/19

P. J. Townsend.

Engineer Surveyor to Lloyd's Register of Shipping.

LIVERPOOL - 9 SEP 1919

LMC 9.19

MACHINERY CERTIFICATE
ISSUED 10.9.19



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Lloyd's Register
Foundation