

Rpt. 4.

REPORT ON MACHINERY.

No. 79870

Received at London Office 3 NOV 1919

Date of writing Report

19

When handed in at Local Office

- 3 NOV 1919 Port of

LIVERPOOL

No. in Survey held at LythamDate, First Survey Sept 20/18 Last Survey 16/28 19 19

Reg. Book.

(Number of Visits 35)Gross 4114Net 11on the Steel screw Rescue tug 'St. Hilary'When built 1919Master Built at LythamBy whom built Lytham S.B. & Eng. Co.Engines made at LythamBy whom made Dowhen made 1919Boilers made at DoBy whom made Dowhen made 1919Registered Horse Power ✓Owners AdmiraltyPort belonging to LondonNom. Horse Power as per Section 28 208 ✓Is Refrigerating Machinery fitted for cargo purposes noIs Electric Light fitted yes ✓

ENGINES, &c.—Description of Engines

Vertical Triple ✓No. of Cylinders 3No. of Cranks 3Dia. of Cylinders 18 1/4 + 28 + 48 1/4 ✓ Length of Stroke 28 ✓ Revs. per minute 122 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 inter shaft as per rule 8.53 ✓ Dia. of Crank shaft journals as per rule 8.9 ✓ 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 340 ✓No. of Feed pumps 2 ✓ Diameter of ditto 3 1/8 ✓ Stroke 13 1/2 ✓ Can one be overhauled while the other is at work yes ✓No. of Bilge pumps 2 ✓ Diameter of ditto 3 1/8 ✓ Stroke 13 1/2 ✓ Can one be overhauled while the other is at work yes ✓No. of Donkey Engines 2 ✓ Sizes of Pumps 7 1/2 + 5 1/2 x 15 Wier, 6 + 4 1/2 x 6 Fen. sea ✓ No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room three - 2 1/2" ✓ In Holds, &c. A.P. 3" ✓ F.P. 3" ✓ Chain locker 2" ✓ Fore hold 2" ✓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 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 on below the deep water line yes ✓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 17.7.18.8.19. ✓ No. of Certificate 2081/3 ✓Can each boiler be worked separately yes ✓ Area of fire grate in each boiler 42 1/4 ✓ No. and Description of Safety Valves to each boiler 2, spring loaded ✓ Area of each valve 7.070" ✓ 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 1'-2" ✓ Mean dia. of boilers 12'-6" ✓ 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 D.R. lap ✓long. seams T.R. double butt ✓ Diameter of rivet holes in long. seams 1 1/16 ✓ Pitch of rivets 7 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 lbs ✓ Size of manhole in shell 16 x 12 ✓plate 85.5 ✓ Size of compensating ring 5 1/2 x 4 x 1/32 ✓ No. and Description of Furnaces in each boiler 3 corrugated ✓ Material M.S. ✓ Outside diameter 3'-3 1/4" ✓Length of plain part top ✓ bottom ✓ Thickness of plates crown 1 1/2" ✓ bottom ✓ Description of longitudinal joint lap weld ✓ No. of strengthening rings ✓Working pressure of furnace by the rules 192 ✓ Combustion chamber plates: Material M.S. ✓ Thickness: Sides 2 1/32 ✓ Back 2 1/32 ✓ Top 2 1/32 ✓ Bottom 3/4 ✓Pitch of stays to ditto: Sides 8 x 9" ✓ Back 8 1/8 x 9 1/8 ✓ Top 8 3/4 x 8 1/2 ✓ If stays are fitted with nuts or riveted heads nuts ✓ Working pressure by rules 200 ✓Material of stays M.S. ✓ Area at smallest part 1.73 ✓ Area supported by each stay 74 1/2 ✓ Working pressure by rules 200 ✓ End plates in steam space: Material M.S. ✓ Thickness 1/8 ✓ Pitch of stays 18 x 18" ✓ How are stays secured D. nuts ✓ Working pressure by rules 185 ✓ Material of stays M.S. ✓Area at smallest part 6.33 ✓ Area supported by each stay 324 ✓ Working pressure by rules 200 ✓ Material of Front plates at bottom M.S. ✓Thickness 1 5/16 ✓ Material of Lower back plate M.S. ✓ Thickness 2 7/32 ✓ 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 + 3 5/8 ✓ Material of tube plates M.S. ✓ Thickness: Front 15/16 ✓ Back 2 3/32 ✓ Mean pitch of stays 7.68 ✓Pitch across wide water spaces 13 1/2" ✓ Working pressures by rules 185 ✓ Girders to Chamber tops: Material M.S. ✓ Depth and thickness of girder at centre 7 1/2 x 12 x 7/8 ✓ Length as per rule 2'-6 1/8" ✓ 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 ✓

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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 & 2 main bearing bolts & nuts; 1 pair eccentric strap bolts, 6 coupling bolts, 2 bilge & 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.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- *1918 Sept 20, 30, Oct 11, 21, 30, Nov 13, 27, Dec 16, 31, Jan 20, Feb 19, 28, Mar 11, 26, Apr 9, 25.*
During erection on board vessel -- *May 1, 8, 23, June 6, 23, July 11, 17, 25, Aug 8, 28, Sept 11, 25, Oct 4, 7, 15, 19, 20, 25, 28.*
Total No. of visits *35.*

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

" " " donkey " " " *yes*

Dates of Examination of principal parts—Cylinders *20.1.19* Slides *20.1.19* Covers *20.1.19* Pistons *20.1.19* Rods *20.1.19*
Connecting rods *20.1.19* Crank shaft *19.2.19* Thrust shaft *20.1.19* Tunnel shafts *20.1.19* Screw shaft *20.1.19* Propeller *11.7.19*
Stern tube *11.7.19* Steam pipes tested *28.8 & 4.10.19* Engine and boiler seatings *8.8.19* Engines holding down bolts *25.9.19*
Completion of pumping arrangements *7.10.19* Boilers fixed *11.9.19* Engines tried under steam *20.10.19*
Completion of fitting sea connections *25.7.19* Stern tube *25.7.19* Screw shaft and propeller *25.7.19*
Main boiler safety valves adjusted *20.10.19* Thickness of adjusting washers *F. 3/8 P. 9/16 S. A. 3/8 P. 7/16 S.*
Material of Crank shaft *M.S.* Identification Mark on Do. *1289* Material of Thrust shaft *M.S.* Identification Mark on Do. *1289*
Material of *inter.* Tunnel shafts *M.S.* Identification Marks on Do. *1289* Material of Screw shafts *M.S.* Identification Marks on Do. *1289*
Material of Steam Pipes *solid drawn copper, & steel* Test pressure *360 & 570 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 *'St Fagan' & 'St Faith'*

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. 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 + L.M.C. 10.19.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 10.19 FD

The amount of Entry Fee ... £ *4 : 0*
Special ... £ *60 : 16*
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
(*£ 9 : 12 : 9 - Inclusive Fee*).

When applied for, *2/12/19 from Lon*
When received, *17.1.19*

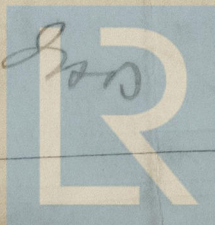
S. Townend. & J. B. Milton
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute

Assigned

L M C 10.19.

WRITTEN: 22/11/19



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