

REPORT ON MACHINERY.

No. 40371

Received at London Office SEP 22 1920

Writing Report Sept 13th 1920 When handed in at Local Office Sept 18th 1920 Port of GLASGOW
 in Survey held at Paisley Date, First Survey 10th Sept 1919 Last Survey 9th Sept 1920
 on the Machinery of SS LAPWING (Number of Visits 38)

ter Built at Paisley By whom built Bow Mc Lachlan & Co Ltd Tons { Gross 1449
 Net 748
 When built

ines made at Paisley By whom made Bow Mc Lachlan & Co Ltd (3460) when made 1920

ers made at Paisley By whom made Bow Mc Lachlan & Co Ltd (1043/4) when made 1920

istered Horse Power Owners General Steam Nav. Co. Ltd. Port belonging to London

Horse Power as per Section 28 243 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes.

INES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 of Cylinders 22" 35" 54" Length of Stroke 39" Revs. per minute 85 Dia. of Screw shaft as per rule 11.82 Material of Iron
 as fitted 11.84 screw shaft
 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
 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
 are fitted, is the shaft lapped or protected between the liners — Length of stern bush 5' 3"
 of Tunnel shaft as per rule 10.48 Dia. of Crank shaft journals as per rule 11.32 Dia. of Crank pin 11 3/8 Size of Crank webs 21 3/8 x 4 1/8 Dia. of thrust shaft under
 as fitted — Dia. of screw 14" Pitch of Screw 16' 9" No. of Blades 4 State whether moveable No Total surface 61.5 sq
 of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 19 1/2 Can one be overhauled while the other is at work Yes
 of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 19 1/2 Can one be overhauled while the other is at work Yes
 of Donkey Engines 4 Sizes of Pumps Feed 4 x 9 1/2 x 18. Har. 4 x 6 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room Three @ 2 1/2" In Holds, &c. 2 in N° 2 Hold @ 2 1/2" + 2 in N° 1 @ 2 1/2"
Sanitary 4" x 4 x 5"
W. Con. 6" x 6 x 6"

of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 4"
 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
 all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
 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
 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
 hat pipes are carried through the bunkers Bilge pipes How are they protected Iron plates
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —

ILERS, &c.—(Letter for record S) Manufacturers of Steel Messrs W. Beardmore & Co Ltd Parkhead.

total Heating Surface of Boilers 4939 sq Is Forced Draft fitted No No. and Description of Boilers Two S. E. Marine
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 19/2/20 No. of Certificate 15104
26/2/20 15119

in each boiler be worked separately Yes Area of fire grate in each boiler 63.25 No. and Description of Safety Valves to

ch boiler Two Spring loaded Area of each valve 4.06 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 6'-0" INT dia. of boilers 15' 3" Length 11' 6" Material of shell plates Steel

thickness 1 1/32 Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR Lap

g. seams TR DBS Diameter of rivet holes in long. seams 19/32 Pitch of rivets 9/8 Lap of plates or width of butt straps 1' 4 1/4"

er centages of strength of longitudinal joint rivets 86.3 Working pressure of shell by rules 181 Size of manhole in shell 16" x 12"

ze of compensating ring 32 1/4 x 28 1/4 x 1 1/32 No. and Description of Furnaces in each boiler 3. Suspension Bulb Material Steel Outside diameter 4' 19/16

length of plain part top Thickness of plates crown 14/32 Description of longitudinal joint Weld No. of strengthening rings None

Working pressure of furnace by the rules 181 Combustion chamber plates: Material Steel Thickness: Sides 5/8 Back 1/16 Top 5/8 Bottom 29/32

itch of stays to ditto: Sides 8 1/4 x 9" Back 9 x 9 1/2 Top 8 1/4 x 8 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 181

aterial of stays Steel Area at smallest part 1.46 sq Area supported by each stay 44.25 Working pressure by rules 189 End plates in steam space:

aterial Steel Thickness 1 5/32 Pitch of stays 14" x 19" How are stays secured D. Nut Working pressure by rules 184 Material of stays Steel

Area at smallest part 6.1 Area supported by each stay 323 Working pressure by rules 196 Material of Front plates at bottom Steel

Thickness 1 1/32 Material of Lower back plate Steel Thickness 29/32 Greatest pitch of stays 14 1/2 x 9 Working pressure of plate by rules 194

iameter of tubes 3 1/2" Pitch of tubes 4 3/4 x 4 1/16 Material of tube plates Steel Thickness: Front 1 1/32 Back 29/32 Mean pitch of stays 9 1/16

itch across wide water spaces 14 1/2 Working pressures by rules 181 Girders to Chamber tops: Material Steel Depth and

ickness of girder at centre 9 1/2 x 7/8 Length as per rule 2' 10 15/32 Distance apart 8 1/2" Number and pitch of stays in each 3 @ 8 1/4"

Working pressure by rules 219 Steam dome: description of joint to shell None % 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 None 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

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 4 Conn. Rod top end bolts and nuts. 2 Bottom end bolts and nuts. 2 Main bearing bolts. 1 set of coupling bolts. 1 set of feed and bilge pump valves. A quantity of assorted bolts and nuts Iron of various sizes

The foregoing is a correct description,

BOW, M'LACHLAN & CO. LTD.

Mackintosh

DIRECTOR.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919 Sep 10, 16, 23 Oct 3, 17, 22, 31 Nov 5, 16 (1920) Jan 13, 16, 28, 30 Feb 9, 17, 19, 26 Mar 3, 29 Apr 9, 13, 21, 26, 30
During erection on board vessel - - - May 10, 17, 20, 31 Jun 8, 17, 23, 29 July 6, 14, 21 Aug 31 Sep 7, 9
Total No. of visits 38

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders 26-2-20 Slides 14-5-20 Covers 13-1-20 Pistons 30-4-20 Rods 9-4-20

Connecting rods 13-1-20 Crank shaft 16-1-20 Thrust shaft 13-1-20 Tunnel shafts — Screw shaft 21-4-20 Propeller 21-4-20

Stern tube 9-4-20 Steam pipes tested 21-4-20 Engine and boiler seatings 14-6-20 Engines holding down bolts 14-4-20

Completion of pumping arrangements 31-8-20 Boilers fixed 14-4-20 Engines tried under steam 9-9-20

Completion of fitting sea connections 14-6-20 Stern tube 14-6-20 Screw shaft and propeller 14-6-20

Main boiler safety valves adjusted 4-9-20. Thickness of adjusting washers S B P V $\frac{5}{16}$ " S B S V $\frac{4}{16}$ " P B P V $\frac{3}{8}$ " P B B V $\frac{19}{64}$ "

Material of Crank shaft S Identification Mark on Do. $\frac{3460}{D.C.B. 16-1-20}$ Material of Thrust shaft S Identification Mark on Do. $\frac{3460}{D.C.B. 13-1-20}$

Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts Iron Identification Marks on Do. $\frac{3460}{D.C.B. 21-4-20}$

Material of Steam Pipes Steel Test pressure 540 lbs $\frac{1}{2}$ "

Is an installation fitted for burning oil fuel Not Completed Is the flash point of the oil to be used over 150°F. yes.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case no If so, state name of vessel —

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 Rules and approved plans. The workmanship and materials are of good quality. It has been securely fitted on board and tried under steam with satisfactory results.

It is submitted that this vessel is eligible for a record of \otimes LMC 9-20 in the Register Book

Oil fuel installation only partly fitted and record "Fitted for oil fuel FP above 150°F", to be assigned when installation has been completed and found in order by the Surveyor

To complete the oil fuel installation several pipes in main keels in stowage to connect up, and piping from fuel pumps to boilers to complete.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 9.20.

The amount of Entry Fee ... £ 2 : 0 :

Special ... £ 33 : 13 :

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for,

17.9.20.

When received,

25/10/20

£6626

D. C. Barr.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW

Assigned + L.M.C.

9.20.

FRI. MAY. 20 1921



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