

Date of writing Report Nov^r 4th 1921 When handed in at Local Office 8. 11. 1921 Port of GLASGOW.No. in Survey held at Yroon. Date, First Survey 11. 3. 1919 Last Survey Nov^r 2nd 1921
Reg. Book. on the Machinery of S.S. PHILOMEL (Number of Visits 86) Gross 1563.35
Tons Net 928.26Master Yroon Built at Yroon By whom built Ailsa S.B. Co. Ltd N° 371 When built 1921Engines made at Yroon By whom made Ailsa S.B. Co. Ltd N° 106 when made 1921Boilers made at Glasgow By whom made Dunsmuir & Jackson (B. 125) when made 1921Registered Horse Power General Steam Nav. Co. Ltd Port belonging to LondonNom. Horse Power as per Section 28 292 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 23" 34½" + 60" Length of Stroke 39" Revs. per minute 90 Dia. of Screw shaft as per rule 12.15 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 Yes If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 68½"
Dia. of Tunnel shaft as per rule 11.15 Dia. of Crank shaft journals as per rule 11.4 Dia. of Crank pin 11 ¾" Size of Crank webs 21¼" x 4½" Dia. of thrust shaft under collars 11 ¾" Dia. of screw 14" 3" Pitch of Screw 15" 9" No. of Blades 4 State whether moveable No Total surface 63.5 sq
No. of Feed pumps 2 Diameter of ditto 4" Stroke 20" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 4" Stroke 20" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 8 Sizes of Pumps See over No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 4 @ 2½" In Holds, &c. N° 1 hold 2 @ 2½" N° 2 hold 2 @ 2½"
N° 3 hold 2 @ 2½"

No. of Bilge Injections 1 sizes 4½" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 1 @ 4"
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 Bilge & Ballast How are they protected Wood
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 Yes worked from Shelter deck
Manufacturers of Steel Beardmore & Co. J. Spencer & Sons D. Colville & Sons

BOILERS, &c.—(Letter for record S)
Total Heating Surface of Boilers 5154 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 18-10-20 No. of Certificate 15540
Can each boiler be worked separately Yes Area of fire grate in each boiler 83½ sq No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 8.29 sq 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 3'-6" Mean dia. of boilers Length Material of shell plates
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell
Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom bottom Back Top Bottom
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness Sides Back Top Bottom Working pressure by rules
Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts riveted heads Working pressure by rules End plates in steam space:
Material of stays Area at smallest part Area supported by each stay Working pressure by rules Material of stays Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules 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 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Date of Test Pressure to which each is adjusted Is Easing Gear fitted ameter of Safety Valves

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? -

SPARE GEAR. State the articles supplied:— Two connecting rod top end bolts and nuts
Two bottom end bolts and nuts, Two main bearing bolts, One set of coupling
bolts One set of feed and bilge pump valves, A quantity of assorted
bolts and nuts, Iron of various sizes.

The foregoing is a correct description,

FOR AILSA SHIPBUILDING CO., LIMITED.

J. McNaughton

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919 Mar 11 14 20 24 31 Apr 2 4 7 18 23 28 May 12 22 28 Jun 2 23 Jul 8 16 Aug 14 Sep 18 12 Oct 7 13 21 28 31 Nov 4 6 13
During erection on board vessel - - - Dec 1 4 9 12 14 17 19 23 26 (1920) Jan 15 19 23 26 29 Feb 13 23 27 Mar 1 26 May 18 21 Jun 2 10 15 22 Jul 5 12 28 Sep 14 Nov 9 15 22
Total No. of visits 86.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 14-12-20 Slides 26-11-20 Covers 30-11-20 Pistons 26-11-20 Rods 26-11-20
Connecting rods 26-11-20 Crank shaft 23-11-20 Thrust shaft 30-11-20 Tunnel shafts 30-11-20 Screw shaft 30-11-20 Propeller 21-12-20
Stern tube 3-2-21 Steam pipes tested 1-4-21 Engine and boiler seatings 8-2-21 Engines holding down bolts 11-3-21

Completion of pumping arrangements 28-10-21 Boilers fixed 29-4-21 Engines tried under steam Nov. 2nd 1921.

Completion of fitting sea connections 16-2-21 Stern tube 8-2-21 Screw shaft and propeller 16-2-21

Main boiler safety valves adjusted 28-10-21 Thickness of adjusting washers PBSV $\frac{15}{32}$ PBPV $\frac{3}{8}$ SBSV $\frac{3}{8}$ SBPV $\frac{25}{64}$

Material of Crank shaft Steel Identification Mark on Do. 9499 No 106 DCB 23-11-20 Material of Thrust shaft Steel Identification Mark on Do. 9499 No 106 DCB 30-11-20

Material of Tunnel shafts Steel Identification Marks on Do. 9499 No 106 DCB 30-11-20 Material of Screw shafts Iron Identification Marks on Do. 30-11-20

Material of Steam Pipes Lap-welded iron Test pressure 540 lbs \square

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 S.S. Starling

General Remarks (State quality of workmanship, opinions as to class, &c.)

Donkey Pumps. Gen. Service Pump 8" x 6" x 8" Ballast Pump 6" x 8" x 8" Cir. Pump (Cent.) 11"
Aux Cond. Pump 6" x 6" x 6" Sanitary Pump 4" x 4" x 5" Harbour Pump. 4" x 6" x 8"
Two main feed pumps (Weirs) 4" x 9 1/2" x 21"

The engines have been constructed under Special Survey in accordance
with the Rules of the Society. The workmanship and materials are of good
quality. The engines and boilers have been securely fitted on board the
vessel and tried under steam with satisfactory results.

It is submitted that this vessel is eligible for a record of +LMC 11-21
in the Register Book.

Oil fuel heating coils in double bottom tanks and settling tanks have
been fitted and tested, but no more of oil fuel plant has been fitted.

It is submitted that
this vessel is eligible for

THE RECORD. + L.M.C. - 11.21. C.B.

The amount of Entry Fee £ 4 : 0 : When applied for, 8/11/21
Special £ 41 : 5 :
Donkey Boiler Fee £ : When received, 11/11/21
Travelling Expenses (if any) £ 6 : 10 :

David C Barr
Engineer-Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW, 15 NOV 1921

Assigned + LMC 11.21.

MACHINERY DEPT
WRITTEN
21-11-21



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Foundation