

Rpt. 4.

## REPORT ON MACHINERY

No. 41409

Received at London Office

WED. 19 OCT. 1921

Date of writing Report Oct 8<sup>th</sup> 1921 When handed in at Local Office Oct 10<sup>th</sup> 1921 Port of GLASGOW.No. in Survey held at Yroon Date, First Survey 11th Mar. 1919 Last Survey Oct 5<sup>th</sup> 1921  
Reg. Book. on the Machinery of SS HALCYON (Number of Visits 104)Master Yroon Built at Yroon By whom built Ailsa S B Co Ltd N° 340 Tons Gross 1566  
When built 1921 Net 929Engines made at Yroon By whom made Ailsa S B Co Ltd (N° 105) when made 1921Boilers made at Glasgow By whom made Dunsmuir & Jackson B. 124 when made 1921Registered Horse Power Owners 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, &amp;c.—Description of Engines

Triple ExpansionNo. of Cylinders 3 No. of Cranks 3Dia. of Cylinders 23" 34½" 60" Length of Stroke 39" Revs. per minute 90 Dia. of Screw shaft as per rule 12.15" Material of Iron  
as fitted 12½" screw shaftIs 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If twoliners 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 11¾" Size of Crank webs 21½" x 4½" Dia. of thrust shaft under  
as fitted 11¾" as fitted 11¾" collars 11¾" Dia. of screw 14" 3" Pitch of Screw 14" 0" No. of Blades 4 State whether moveable No Total surface 56 sqNo. of Feed pumps 2 Diameter of ditto 4" Stroke 20" Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 4" Stroke 20" Can one be overhauled while the other is at work YesNo. of Donkey Engines 10 Sizes of Pumps See over No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 4 @ 2½" In Holds, &c. N° 1 Hold 2 @ 2½" No 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"  
1 @ 3"  
2 @ 2½"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 accessibleAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks BothAre 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 AboveAre 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 YesWhat pipes are carried through the bunkers Bilge & Ballast How are they protected WoodAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesIs the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Shelter Deck

## BOILERS, &amp;c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 5154 sq Is Forced Draft fitted No No. and Description of Boilers Two S E. MarineWorking Pressure 180 lbs Tested by hydraulic pressure to — Date of test — No. of Certificate —Can each boiler be worked separately Yes Area of fire grate in each boiler — No. and Description of Safety Valves toeach 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 YesSmallest distance between boilers or uptakes and bunkers or woodwork 3' 6" Mean dia. of boilers — Length — Material of shell platesThickness — Range of tensile strength — Are the shell plates welded or flanged — Descrip. of riveting: cir. seamslong. seams — Diameter of rivet holes in long. seams — Pitch of rivets — Lap of plates or width of butt strapsPer 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 — Thickness of plates — Description of longitudinal joint — No. of strengthening rings —Working pressure of furnace by the rules — Combustion chamber plates: Material — Thickness: Sides — Back — Top — Bottom —Pitch of stays to ditto: Sides — Back — Top — If stays are fitted with riveted heads — Working pressure by rules —Material of stays — Area at smallest part — Area supported by each stay — Working pressure by rules — End plates in steam space:Material — Thickness — Pitch of stays — How are stays secured — 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 andthickness 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

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

003742-003749-0168



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end and two bottom end connecting rod bolts and nuts, two main bearing bolts, 1 set of coupling bolts 1 set of feed and bilge pump valves, a quantity of assorted bolts and nuts, and iron of various sizes

The foregoing is a correct description,

FOR AILSA SHIPBUILDING CO., LIMITED

McNaughton

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919 Mar 11/4-20-24-31 Apr 2-4-7-14-18-23-28-30 May 12-22-28 Jun 2-23 Jul 8-16 Aug 14-19-25 Sep 4-12 Oct 10-13 16-21 Nov 4-5-13 19-27 Dec 1-4-9 1920 Jan 4-19-26 Feb 13-27 Mar 3-19-22-26-30 Apr 7-13-19-23 May 4-12-18-25 Jun 2-3-10-15-22 Jul 5-12-28 Sep 14-20-27 Oct 1-8-15-22-29 Nov 5-12-19 Dec 2-9-16-23-30 Jan 3-8-10-14-21-28 Feb 13-20-27 Mar 3-10-17-24-31 Apr 7-14-21-28 May 4-11-18-25 Jun 2-9-16-23-30 Jul 6-13-20-27 Aug 13-20-27 Sep 6-13-20-27 Oct 13-20-27 Nov 13-20-27 Dec 13-20-27

Total No. of visits

104

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 25-8-20 Slides 5-10-20 Covers 25-8-20 Pistons 22-6-20 Rods 1-4-20 Connecting rods 22-6-20 Crank shaft 5-4-20 Thrust shaft 5-4-20 Tunnel shafts 5-4-20 Screw shaft 5-4-20 Propeller 14-9-20

Stern tube 5-10-20 Steam pipes tested 24-12-20 Engine and boiler seatings 29-10-20 Engines holding down bolts 11-11-20 Completion of pumping arrangements 8-2-21 Boilers fixed 23-11-20 Engines tried under steam 3-10-21

Completion of fitting sea connections 21-10-20 Stern tube 21-10-20 Screw shaft and propeller 21-10-20

Main boiler safety valves adjusted 29-9-21 Thickness of adjusting washers SBSV 13" SBPV 29" PBSV 21" PBPV 3"

Material of Crank shaft Steel Identification Mark on Do. N° 105 J E S Material of Thrust shaft Steel Identification Mark on Do. N° 105 J E S

Material of Tunnel shafts Steel Identification Marks on Do. 5-4-20 Material of Screw shafts Iron Identification Marks on Do. 5-4-20

Material of Steam Pipes Lap welded iron Test pressure 540 lbs " "

Is an installation fitted for burning oil fuel Yes 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 Yes

Is this machinery duplicate of a previous case Yes If so, state name of vessel "Starling" - Gen Rpt W 40144.

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

DONKEY ENGINES. Gen Ser. Pump 8" x 6" x 8" Ballast Pump 6" x 8" x 8" Circulating Pump (Cent) 11" Aux Cond. Pump 6" x 6" x 6" San 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". Two oil transfer pumps (Weirs) 6" x 5 1/2" x 12"

Two oil fuel pressure pumps 3 x 4 1/2 x 6

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 10-21 in the Register Book and to have record of Fitted for Oil Fuel FP above 150°

10-21

It is submitted that this vessel is eligible for THE RECORD + LMC. 10.21. CL

Fitted for Oil Fuel 10.21 FP above 150°F.

The amount of Entry Fee ... £ 4 : 0

3/5 Special ... £ 41 : 5

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ 4 : 10

When applied for,

17.10.1921.

When received,

19.10.1921.

MACHINERY CERTIFICATE WRITTEN 26.10.21 (dated 19.10.21)

Engineer Surveyor to Lloyd's Register of Shipping.

David C Barr.

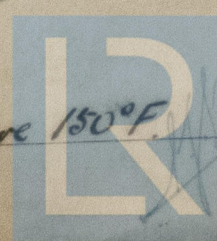
Committee's Minute

GLASGOW

Assigned

+ L.M.C 10.21.

Fitted for Oil Fuel 10.21. F.P. above 150°F.



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