

REPORT ON MACHINERY.

No. 43597
WED. JUN. 25 1924

Received at Office

Date of writing Report 1923 When handed in at Local Office 16 6 10 34 Port of Glasgow.
 No. in Survey held at Clydesbank Date, First Survey 2nd July 1920 Last Survey 11th June 1924
 Reg. Book. on the s/s "SAINT KENNETH" (Number of Visits 43) Gross 681 Tons Net 287
 Master Built at Bowling By whom built Scott & Sons No. 294 When built 1924
 Engines made at Clydesbank By whom made Ritchison, Blair & Co. No. 144 when made 1924.
 Boilers made at Glasgow By whom made Burns & Jackson No. B149 when made 1924.
 Registered Horse Power Owners J. Aitken & Co. Port belonging to Dublin.
 Nom. Horse Power as per Section 28 116 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion steam reciprocating No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 15" 25½" 41" Length of Stroke 30" Revs. per minute 95 Dia. of Screw shaft as per rule 8.15" Material of screw shaft as fitted 8 7/16" Steel
 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 If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 2' 10 5/8" No oil gland
 Dia. of Tunnel shaft as per rule 7.77" Dia. of Crank shaft journals as per rule 8.15" Dia. of Crank pin 8 1/2" Size of Crank webs 5 3/8" x 5 1/2" Dia. of thrust shaft under collars 8 1/4" Dia. of screw 10" 0" Pitch of Screw 14" 0" No. of Blades 4 State whether moveable No Total surface 34.5 ft²
 No. of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 16 1/2" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/4" Stroke 16 1/2" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 vertical duplex Sizes of Pumps 6" x 4 1/4" x 6", 8" x 9" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room three of 2 1/2" bore In Hold, &c. two of 2 1/4" bore
 No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2 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 No
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks valves and cocks
 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 hold suction How are they protected casing
 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 No Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record (S) Manufacturers of Steel
 Total Heating Surface of Boilers 2018 ft² Is Forced Draft fitted No No. and Description of Boilers 1 S.B. one cylindrical marine.
 Working Pressure 180 lbs Tested by hydraulic pressure to Date of test 21. 11. 23 No. of Certificate 16370
 Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 74" Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork well clear 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 rivets plate 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
 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 nuts or 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 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 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

004029-004036-0056

IS A DONKEY BOILER FITTED? *no.*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *2 top end bolts and nuts, 2 bottom end bolts and nuts, 2 main bearing bolts, one set of coupling bolts, one set each of feed and bilge pump valves, one main check valve, one c.i. propeller, quantity of assorted bolts and nuts, iron & steel of various sizes.*

The foregoing is a correct description,

FOR AND ON BEHALF OF

AITCHISON, BLAIR, LIMITED.

Arch Blair

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1920 Feb 2-12 Mar 22 Apr 9-21 May 10 Jul 1-12 29 1921 Mar 22 Apr 20-26 May 5-18-30 Jun 3-24 Oct 4 Dec 19 1922*
{ During erection on board vessel -- } *Jun 7-1923 Feb 19 Jun 5-13-28 Jul 3 Aug 7 Sep 7 Oct 10-31 Nov 27 Dec 5-28 1924 Jan 8 Feb 6 Mar 19-28 Apr 2-7-24-28*
Total No. of visits *43*

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

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders *23/2/20* Slides *23/2/20* Covers *23/2/20* Pistons *2/3/20* Rods *23/2/20*

Connecting rods *23/2/20* Crank shaft *2/3/20* Thrust shaft *25/3/24* Tunnel shafts *✓* Screw shaft *7/8/23* Propeller *6/2/24*

Stern tube *25/3/24* Steam pipes tested *18/4/24* Engine and boiler seatings *25/3/24* Engines holding down bolts *2/4/24*

Completion of pumping arrangements *28/4/24* Boilers fixed *2/4/24* Engines tried under steam *11/6/24*

Completion of fitting sea connections *25/3/24* Stern tube *25/3/24* Screw shaft and propeller *25/3/24*

Main boiler safety valves adjusted *24/4/24* Thickness of adjusting washers *1 15/32"*

Material of Crank shaft *Steel* Identification Mark on Do. *130. T.M.* Material of Thrust shaft *Steel* Identification Mark on Do. *635*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shaft *Steel* Identification Marks on Do. *590*

Material of Steam Pipes *Copper* Test pressure *360 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 *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 built under Survey and the materials tested in accordance with the rules of this Society. The materials and workmanship, as far as can be seen, are sound and good and the engines and boiler have been properly fitted on board and tried under steam. The machinery of this vessel is eligible in my opinion to have the record of L.M.C. 6-24 entered in the Register Book. See Glasgow report N° 43174 on the boiler.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 6.24. CL.

Harry Clarke
26/6/24

A. Campbell
Engineer Surveyor to Lloyd's Register of Shipping

The amount of Entry Fee ... £ *3 : 0* :
Special *3/5 of total* £ *17 : 8* :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *17.6.24*
When received, *19.6.24*

Committee's Minute **GLASGOW** *24 JUN 1924*

Assigned *+ LMC 6.24.*



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