

REPORT ON MACHINERY.

No. 42817

Received at London Office
 Date of writing Report 12th June 1923 When handed in at Local Office 15th June 1923 Port of Glasgow WED. JUN. 20 1923
 No. in Survey held at Paisley Date, First Survey 14th Dec. 1922 Last Survey 1st June 1923
 Reg. Book. 80869 on the Steel Screw Steamer "SAINT ORAN" (Number of Visits 15)
 Master Bowling Built at Bowling By whom built Scott & Sons (N° 292) When built 1923
 Engines made at Paisley By whom made Fishers, Ltd. (N° 227) when made 1923
 Boilers made at Glasgow By whom made Smith & B. & S. Coy. (N° 1785) when made 1923
 Registered Horse Power 55 Owners J. & A. Gardner & Co. Ltd. Port belonging to Glasgow
 Nom. Horse Power as per Section 28 55 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Compound Surface Condensing No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 14" + 30" Length of Stroke 24" Revs. per minute 104 Dia. of Screw shaft 6 7/8" Material of 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 ✓ If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 2' 5 1/2"
 Dia. of Tunnel shaft as per rule 6 5/8" Dia. of Crank shaft journals as per rule 6 5/8" Dia. of Crank pin 6 7/8" Size of Crank webs 13" x 4 3/4" Dia. of thrust shaft under
 collars 6 1/16" Dia. of screw 7'-0" Pitch of Screw 11'-6" No. of Blades 4 State whether moveable no Total surface 20.75 ft.²
 No. of Feed pumps one Diameter of ditto 2 1/4" Stroke 10 1/2" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps one Diameter of ditto 2 1/4" Stroke 10 1/2" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines one Sizes of Pumps 6" x 4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room four @ 2" In Holds, &c. two @ 2"

No. of Bilge Injections one sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes: 2"
 Are all the bilge suction pipes fitted with yes Are the yes 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 2 Hold Suctions: 1 Ford Tank How are they protected Wood casings
 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) Manufacturers of Steel

Total Heating Surface of Boilers 1076 ft.² Is Forced Draft fitted no No. and Description of Boilers 1—Cylindrical S.E. Return tube
 Working Pressure 135 lbs./sq. in. Tested by hydraulic pressure to 140 lbs./sq. in. Date of test 1923 No. of Certificate 163
 Can each boiler be worked separately yes Area of fire grate in each boiler 49 ins.² No. and Description of Safety Valves to yes
 each boiler 2: Direct spring Area of each valve 49 ins.² Pressure to which they are adjusted 140 lbs./sq. in. Are they fitted with lifting gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork well clear Mean dia. of boilers 140 lbs./sq. in. Length of shell plates 140 lbs./sq. in. Material of shell plates yes
 Thickness Range of tensile strength Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams yes
 long. seams Diameter of rivet holes in long. seams Pitch of rivets yes Lay of plates or width of butt straps yes
 Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell yes
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 Length of plain part top Thickness of plates bottom 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 End plates in steam space:
 Material of stays Area at smallest part Area supported by each stay Working pressure by rules Material of stays yes
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom
 Area at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules yes
 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 yes
 Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes yes
 Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed yes
 SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to yes
 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 yes

002109-002118-0012

IS A DONKEY BOILER FITTED?

NO

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:—

2 - Connecting rod top-end bolts & nuts: ✓

2 - Connecting rod bottom-end bolts & nuts: ✓

2 - Main bearing bolts & nuts: ✓

One set - Coupling bolts & nuts: ✓

One set - Feed pump valves: ✓

One set - Bilge pump valves: ✓

One set - Piston springs; Quantity assorted bolts & nuts: iron of 1 ✓

The foregoing is a correct description,

FISHERS LIMITED.

Atkinson Fisher

MANAGING DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1922 Dec 14. 27 1923 Jan 15. 22 Feb 7. 22 Mar 7. 26 Apr 16. 27 May 4. 8. 17. 28 June 15.
During erection on board vessel - - -
Total No. of visits 15.

Is the approved plan of main boiler forwarded herewith

Already sent. 42563

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders { 15-1-23 7-2-23 Stiles 15-1-23 Covers 27-12-22 Pistons 15-1-23 Rods 15-1-23
Connecting rods 22-1-23 Crank shaft { 15-1-23 7-3-23 Thrust shaft 16-4-23 Tunnel shafts none Screw shaft 16-4-23 Propeller 7-3-23
Stern tube 7-3-23 Steam pipes tested 28-5-23 Engine and boiler seatings 8-5-23 Engines holding down bolts 17-5-23
Completion of pumping arrangements 1-6-23 Boilers fixed 1-6-23 Engines tried under steam 1-6-23
Completion of fitting sea connections 4-5-23 Stern tube { 1-5-23 4-5-23 Screw shaft and propeller 4-5-23
Main boiler safety valves adjusted 1-6-23 Thickness of adjusting washers 1/4" P. 1/4" S.
Material of Crank shaft steel Identification Mark on Do. LLOYD'S 930 6-2-23 J.B.S.
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Thrust shaft steel Identification Mark on Do. LLOYD'S 939 16-4-23 J.B.S.
Material of Screw shafts N. Iron Identification Marks on Do. LLOYD'S 939 16-4-23 J.B.S.
Material of Steam Pipes S.D. Copper ✓ Test pressure 270 lbs./in² ✓
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.)

These engines have been built under Special Survey and the materials tested in accordance with the rules: the materials & workmanship are good: along with the Main Boiler (Gls. Rpt. 42563) they have been fitted on board and tried under steam with satisfactory results.

It is submitted that this vessel's machinery be classed in the Register Book with notations — L.M.C. 6.23 & T.S.-CL.

It is submitted that this vessel is eligible for THE RECORD. + LMC 6.23. CL.

The amount of Entry Fee ... £ 2 : - :
Special ... £ 9 : - :
Donkey Boiler Fee ... £ ✓ :
Travelling Expenses (if any) £ ✓ :
When applied for, 19. 6. 23
When received, 20. 6. 23

Committee's Minute

Assigned + LMC 6.23

GLASGOW

19 JUN 1923

CERTIFICATE

WRITTEN 1/8/23

(dated 20/6/23)



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