

REPORT ON MACHINERY.

No. 40230.

Received at London Office

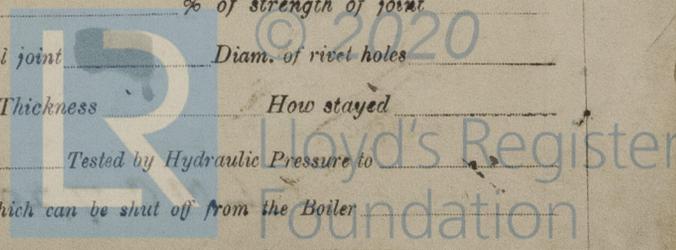
WED. AUG. 4 1920

Date of writing Report July 20th 1920 When handed in at Local Office July 23rd 1920. Port of GLASGOW
 No. in Survey held at Paisley Date, First Survey 5th June, 1919; Last Survey July 16th 1920.
 Reg. Book. on the S.S. SAINT AIDAN (Number of Visits 32) Tons } Gross 362
 } Net 138
 Master James Coffey. Built at Bowling By whom built Scott & Sons 286. When built 1920
 Engines made at Paisley By whom made Fisher's Ltd 224 when made 1920
 Boilers made at Glasgow By whom made Forth Shipbuilding & Eng. Coy Ltd 1901 when made 1920.
 Registered Horse Power 40 Owners J. A. Gardner & Co Ltd Port belonging to Glasgow.
 Nom. Horse Power as per Section 28 40 ~~70~~ 64. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Compound Expansion No. of Cylinders Two No. of Cranks Two
 Dia. of Cylinders 16" x 34" Length of Stroke 24" Revs. per minute 108 Dia. of Screw shaft 4.23 Material of screw shaft Iron
 as fitted 4.5
 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 30"
 Dia. of Tunnel shaft None Dia. of Crank shaft journals 4.03 Dia. of Crank pin 4.25 Size of Crank webs 13 1/2 x 5 1/4 Dia. of thrust shaft under
 collars 4 1/4 Dia. of screw 8' 6" Pitch of Screw 10' 9" No. of Blades 4 State whether moneable No Total surface 24.5 sq
 No. of Feed pumps One Diameter of ditto 2 1/2 Stroke 12" Can one be overhauled while the other is at work -
 No. of Bilge pumps One Diameter of ditto 2 1/2 Stroke 12" 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 Two @ 2" Boiler Room. 2 @ 2" In Holds, &c. Two @ 2" in hold One @ 2" for
One @ 2" Aft Peak.
 No. of Bilge Injections 1 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 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 Forward Suctions How are they protected Wood 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 None Is it fitted with a watertight door - worked from -

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Steel Coy of Scotland
 Total Heating Surface of Boilers 1360 sq Is Forced Draft fitted No No. and Description of Boilers One single-ended
 Working Pressure 130 Tested by hydraulic pressure to 260 Date of test 11-2-20 No. of Certificate 15084
 Can each boiler be worked separately - Area of fire grate in each boiler 43 sq No. and Description of Safety Valves to
 each boiler Two Spring-loaded Area of each valve 5-9 Pressure to which they are adjusted 135 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 4'-0" ^{INT} ~~Mean~~ dia. of boilers 12'-6" Length 10'-0" 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 Thickness of plates ^{top} Description of longitudinal joint ^{bottom} 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 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 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

UPERHEATER. Type Separate Date of Approval of Plan See Tested by Hydraulic Pressure to See
 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 See



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, Two connecting rod bottom end bolts
Two main bearing bolts, One set of coupling bolts. One set of feed and bidge
pump valves. One set piston rings. A quantity of assorted bolts, nuts and
Iron of various sizes

The foregoing is a correct description,

FISHERS LIMITED.

At Houston Fisher

DIRECTOR

Manufacturer.

Dates of Survey while building (1919) June 5. 23. Aug. 5. Sep. 11. 23. Oct. 6. 10. 22. Nov. 18. (1920) Mar. 4. 10. 19. 26. Apr. 7. 9.
During progress of work in shops --
During erection on board vessel --- 20. 28. 30. May 7. 20. 21. 26. June 3. 8. 16. July 7. 13. 14. 16.
Total No. of visits 32.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 30-6-20 Slides 10-10-19 Covers 30-6-20 Pistons 26-5-20 Rods 26-5-20

Connecting rods 26-5-20 Crank shaft 4-3-20 Thrust shaft 19-3-20 Tunnel shafts None Screw shaft 9-4-20 Propeller 9-4-20

Stern tube 20-4-20 Steam pipes tested { 4-6-20 } Engine and boiler seatings 21-5-20 Engines holding down bolts 14-4-20

Completion of pumping arrangements 13-4-20 Boilers fixed 3-6-20 Engines tried under steam 15-4-20

Completion of fitting sea connections 28-4-20 Stern tube 28-4-20 Screw shaft and propeller 28-4-20

Main boiler safety valves adjusted 16-6-20 Thickness of adjusting washers PV 7/64 SV 1/64

Material of Crank shaft Steel Identification Mark on Do. JRW Material of Thrust shaft Iron Identification Mark on Do. DCB

Material of Tunnel shafts None Identification Marks on Do. - Material of Screw shafts Iron Identification Marks on Do. DCB

Material of Steam Pipes SD Copper Test pressure 260 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 Yes If so, state name of vessel S.S. Balfron.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines have been built under special survey in accordance with the Rules of the Society. The materials and workmanship are of good quality. The engines and boiler have been securely fitted on board the vessel and tried under steam with satisfactory results. The machinery is now eligible in my opinion to have notification of + LMC 7-20 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 7. 20.

RELL 9/8/20

FR

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 5 : 19 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 2-8-1920
When received, 14/8/20

GLASGOW 3-AUG 1920

Committee's Minute

Assigned + LMC 7,20

David C Barr.

Engineer Surveyor to Lloyd's Register of Shipping.



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Lloyd's Register Foundation

pt. 5a.
Date of writing Report
No. in Survey
Reg. Book.
on the
Master James
Engines made at
Boilers made at
Registered Horse
MULTITUB
Letter for recor
Boilers
No. of Certificat
safety valves to
Are they fitted
Smallest distan
Material of she
Descrip. of riv
Lap of plat
rules 130
boiler Jm
Description of
plates: Mate
No. 2405
or Scott Jo
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Boiler No. 176
This request
which provide that
While the Comm
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ny report or certifi
society, or for any error
the Secretary
Lloyd's R

Glasgow.
Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.