

REPORT ON MACHINERY

No. 18196

Received at London Office WED. APR. 16 1924

Date of writing Report 19 When handed in at Local Office 7/4/1924 Port of GREENOCK

No. in Survey held at Greenock Date, First Survey 26th Jan'y, 1923 Last Survey 5th April, 1924
 Reg. Book. 3/3 "Bedarton" (Number of Visits 47)

Master Built at Dumbarton By whom built A. McMillan & Co. (488) Tons Gross 1732 Net 1005
 Engines made at Greenock By whom made John & Richard (598) when made 1924
 Boilers made at ditto By whom made ditto (598) when made 1924

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 165 Is Refrigerating Machinery fitted for cargo purposes 870 Is Electric Light fitted Yes

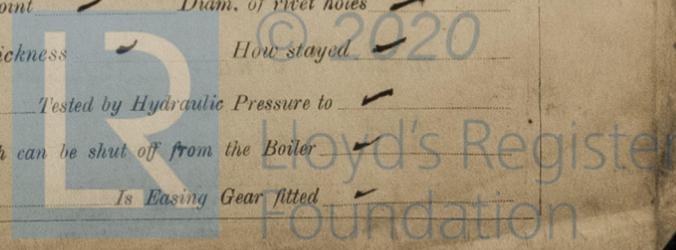
ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 15" - 26" - 42" Length of Stroke 30" Revs. per minute 90 Dia. of Screw shaft as per rule 9 7/8" Material of screw shaft S
 Is the screw shaft fitted with a continuous liner the whole length of the 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 3' 3 1/2"

Dia. of Tunnel shaft as per rule 8.09" Dia. of Crank shaft journals as per rule 8.49" Dia. of Crank pin 8 3/4" Size of Crank webs 16 3/4" Dia. of thrust shaft under collars 8 3/4" Dia. of screw 2.0" Pitch of Screw 11" 6" No. of Blades 4 State whether moveable Yes Total surface 55 #
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 15" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 15" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps Fed 6" 4" 6" Ball 9" 11 1/2" 11" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2. 3" Inq Room 1. 3" In Holds, &c. 2 4" m. rock

No. of Bilge Injections one sizes 6" Connected to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes 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
 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 Steam & Exhaust How are they protected Steel 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 Belleville - Lanarkshire Steel Co. 25B
 Total Heating Surface of Boilers 2598 # Is Forced Draft fitted Draught No. and Description of Boilers 2 Single Ended
 Working Pressure 200 Tested by hydraulic pressure to 350 Date of test 3-5-23 No. of Certificate 1629
 Can each boiler be worked separately Yes Area of fire grate in each boiler 39.416 # No. and Description of Safety Valves to each boiler Double Spring Area of each valve 3.98 # Pressure to which they are adjusted 205 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 12 1/32" Length 10' 6" Material of shell plates S
 Thickness 13/32" Range of tensile strength 28-32 Are the shell plates welded or flanged Descrip. of riveting: cir. seams DR
 long. seams TRIDBS Diameter of rivet holes in long. seams 16/32" Pitch of rivets 8 1/8" width of butt straps 1 7/16"
 Per centages of strength of longitudinal joint rivets 85:76/8 Working pressure of shell by rules 201 Size of manhole in shell 16" 12"
 Size of compensating ring 2 1/8" 2 5/8" 3/32" No. and Description of Furnaces in each boiler 2 Corrugated Material S Outside diameter 3' 11 1/4"
 Length of plain part top Thickness of plates crown 7 5/8" Description of longitudinal joint Weld No. of strengthening rings
 bottom Thickness of plates bottom Working pressure of furnace by the rules 201 Combustion chamber plates: Material S Thickness: Sides 5/8" Back 2 1/32" Top 5/8" Bottom 2 5/32"
 Pitch of stays to ditto: Sides 7 1/2" 8 1/4" Back 8 3/4" 8 1/2" Top 7 1/2" 8" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 201
 Material of stays S Area at smallest part 236.173 Area supported by each stay 4437 # Working pressure by rules 204 End plates in steam space:
 Material S Thickness 1 1/8" Pitch of stays 1 7/16" 1 3/4" How are stays secured DN Working pressure by rules 203 Material of stays S
 Area at smallest part 556 # Area supported by each stay 288 # Working pressure by rules 210 Material of Front plates at bottom S
 Thickness 3/32" Material of Lower back plate S Thickness 13/16" Greatest pitch of stays 13 7/8" 8 1/2" Working pressure of plate by rules 203
 Diameter of tubes 3" Pitch of tubes 4 1/4" 4 1/8" Material of tube plates S Thickness: Front 3/32" Back 3/4" Mean pitch of stays 9.91"
 Pitch across wide water spaces 14" Working pressures by rules 202 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 3/4" 1 1/6" (2) Length as per rule 2.4 1/32" Distance apart 8" Number and pitch of stays in each 3 at 7 1/2"
 Working pressure by rules 205 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



If not, state whether, and when, one will be sent

Is a Report also sent on the Hull of the Ship?

No. 1110 T

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 Anti, ditto for bottom end, 2 main Bearing bolts 1 set of coupling bolts, 1 set of Field Bridge Pump Bolts, a quantity of assorted bolts, nuts, Iron of various sizes

The foregoing is a correct description,
FOR JOHN G. KINCAID & COY., LIMITED.

Robert Green

Manufacturer.

Secretary.

Dates of Survey while building { During progress of work in shops -- 1923. Jan 26. 30. Feb. 5. 14. 15. 20. 27. Mar. 2. 6. 19. 21. 27. 29. Apr. 3. 5. 10. 12. 16. 20. 24. 30. May 1. 3. 8. 10. 18. 25. 30. During erection on board vessel --- June 5. 11. 15. July 11. 13. Oct. 3. Nov. 26. (1924) Jan 14. 23. 25. 26. 29. Feb. 1. 4. 6. 12. 13. Mar. 24. April 5. Total No. of visits 47. Is the approved plan of main boiler forwarded herewith **Yes**

Dates of Examination of principal parts—Cylinders 1- 5- 23 Slides 8- 5- 23 Covers 1- 5- 23 Pistons 8- 5- 23 Rods 12- 4- 23 Connecting rods 12- 4- 23 Crank shaft 1- 5- 23 Thrust shaft 10- 5- 23 Tunnel shafts ✓ Screw shaft 1- 5- 23 Propeller 1- 5- 23 Stern tube 8- 5- 23 Steam pipes tested 1- 2- 24 Engine and boiler seatings see Gk Rept Engines holding down bolts 12- 2- 24 Completion of pumping arrangements 6- 2- 24 Boilers fixed 29- 1- 24 Engines tried under steam 15- 4- 24 Completion of fitting sea connections see Gk Rept Stern tube see Gk Rept Screw shaft and propeller see Gk Rept Main boiler safety valves adjusted 12- 2- 24 Thickness of adjusting washers PV 5/16 SV 3/8 PY 3/8 SV 13/32 LLOYDS 6422-1 598 WGM. LLOYDS 1641 WGM 598 Material of Crank shaft S Identification Mark on Do. LLOYDS 30794 Material of Thrust shaft S Identification Mark on Do. 598 WGM Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts S Identification Marks on Do. WGM 598 Material of Steam Pipes Copper SD ✓ Test pressure 400 lbs ✓ Is an installation fitted for burning oil fuel ✓ 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 Oakton Gk Rept 18104

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

These Engines & Boilers have been built under Special Survey in accordance with the approved plans, the workmanship & material are of good quality, they have been securely fitted on board. Tried under steam found satisfactory. The machinery is eligible in my opinion to have the record of. ✠ L.M.C. 4-24

GREENOCK

It is submitted that this vessel is eligible for THE RECORD. + LMC 4.24. FD. CL.

CERTIFICATE WRITTEN 22/4/24

The amount of Entry Fee ... £ 3 : 0 : When applied for, 8/4/24 Special ... £ 41 : 5 : Donkey Boiler Fee ... £ : : Travelling Expenses (if any) £ : :

W. Gordon-Mitchie
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 APR 1924

Assigned + L.M.C. 4,24

