

REPORT ON MACHINERY.

No. 18288

Received at London Office

17 Sep 1924

Date of writing Report 5-9-1924 When handed in at Local Office 11-9-1924 Port of Greenock

No. in Survey held at Greenock Date, First Survey 3rd April, 1924. Last Survey 6th September 1924
Reg. Book. S/S Forestgate (Number of Visits 38)

Master _____ Built at Glasgow By whom built Barclay Curle & Co. Ltd. 604 Tons { Gross 1600
Net 887

Engines made at Greenock By whom made John & Tuccard & Co. (615) when made 1924

Boilers made at ditto By whom made ditto (615) when made 1924

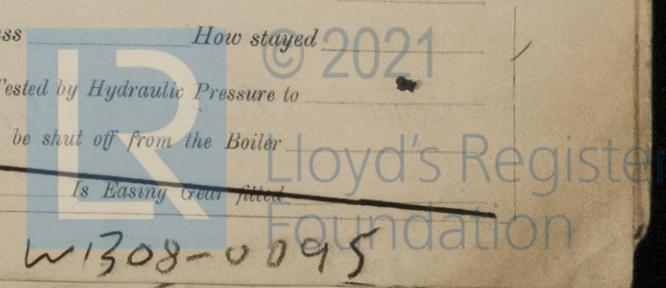
Registered Horse Power _____ Owners Mann, Macneil & Co. Port belonging to London

Nom. Horse Power as per Section 28 169 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triples Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 18"-30"-50" Length of Stroke 33 Revs. per minute 80 Dia. of Screw shaft 10.01" as per rule 9.98" as fitted 10.3/8" 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 41 1/2"
 Dia. of Tunnel shaft 9.08" as per rule 9.03" as fitted 9.1/8" Dia. of Crank shaft journals 9 1/2" as per rule 9.48" as fitted 9.3/4" Dia. of Crank pin 9 3/4" Size of Crank webs 18.6" Dia. of thrust shaft under collars 9 3/4" Dia. of screw 12.0" Pitch of Screw 13.0" No. of Blades 4 State whether moceable 80 Total surface 48.57
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps Ballant 6.7 1/2, 6.2 1/2, 5.5, 5.5 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3. 2 3/4" Tunnel Well 1. 2 1/2" In Holds, &c. 2. 2 3/4" in each. aft Hold Well 1. 2 3/4"
 No. of Bilge Injections 1 sizes 5" Connected condenser or to circulating pump ump Is a separate Donkey Suction fitted in Engine room & size Yes 2 3/4"
 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 below
 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 Bilge Suctions How are they protected Good 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 Yes Is it fitted with a watertight door Yes worked from U.F.R. Platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Famars Iron & Steel Co. of Scotland
 Total Heating Surface of Boilers 2790 Is Forced Draft fitted No No. and Description of Boilers 2 Single Ended 2SB.
 Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 6.6.24 No. of Certificate 1655
 Can each boiler be worked separately Yes Area of fire grate in each boiler 46.58 No. and Description of Safety Valves to each boiler Double Spring Area of each valve 4.91 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 24" Feet Mean dia. of boilers 13.0" Length 10.6" Material of shell plates S
 Thickness 1 1/16" Range of tensile strength 28-32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams DR
 long. seams TR.DBS Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 8" Lap of plates or width of butt straps 16 7/8"
 Per centages of strength of longitudinal joint rivets 90 Working pressure of shell by rules 182 Size of manhole in shell 16 x 12"
 Size of compensating ring 20 x 34 x 13/32 No. and Description of Furnaces in each boiler 3 corrugated Material S Outside diameter 3.5 1/4"
 Length of plain part top 1 1/2" Thickness of plates crown 1 1/2" Description of longitudinal joint weld No. of strengthening rings -
 Working pressure of furnace by the rules 189 Combustion chamber plates: Material S Thickness: Sides 2 1/32" Back 5/8" Top 2 1/32" Bottom 2 1/32"
 Pitch of stays to ditto: Sides 9 5/8 x 5/8" Back 8 7/8 x 5/8" Top 9 5/8 x 5/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 184
 Material of stays S Area at smallest part 1.73 Area supported by each stay 83.9 Working pressure by rules 207 End plates in steam space:
 Material S Thickness 1 5/32" Pitch of stays 19 x 1 7/8" How are stays secured DN Working pressure by rules 186 Material of stays S
 Area at smallest part 5.56 Area supported by each stay 332 Working pressure by rules 183 Material of Front plates at bottom S
 Thickness 1" Material of Lower back plate S Thickness 25/32" Greatest pitch of stays 13/2" Working pressure of plate by rules 187
 Diameter of tubes 3 1/4" Pitch of tubes 4 3/8 x 4 1/2" Material of tube plates S Thickness: Front 1" Back 3/4" Mean pitch of stays 10 5/16"
 Pitch across wide water spaces 14" Working pressures by rules 187 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 1/2 x 5/8 (3) Length as per rule 30.625 Distance apart 8 5/8" Number and pitch of stays in each 2 at 9 1/2"
 Working pressure by rules 192 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 _____



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Connecting Rod bolts each for top and, ditto for bottom, 2 Main Bearing bolts, 1 Set of Coupling bolts, 1 Set of Feed & Bilge Pump cranks, a quantity of assorted bolts, nuts & washers of various sizes

The foregoing is a correct description,

FOR JOHN G. KINCAID & CO.

W. J. Kincaid

Manufacturer. DIRECTOR

Dates of Survey while building: During progress of work in shops - 1924 Apr 3-21-22-25-28-30 May 9-14-19-21-23-29-30 June 3-4-6-17-19-24-26-30 July 1-15-18-22-24-25-30-31. During erection on board vessel - Aug 4-8-13-18-19-22-25-28 Sep 16. Total No. of visits 38.

Is the approved plan of main boiler forwarded herewith

Yes

Is the approved plan of donkey boiler forwarded herewith

Dates of Examination of principal parts: Cylinders 22-7-24 Slides 3-6-24 Covers 22-7-24 Pistons 19-6-24 Rods 19-6-24 Connecting rods 19-6-24 Crank shaft 1-7-24 Thrust shaft 15-7-24 Tunnel shafts 15-7-24 Screw shaft 15-7-24 Propeller 22-7-24 Stern tube 4-6-24 Steam pipes tested 22-8-24 Engine and boiler seatings on 4th Rept Engines holding down bolts 13-8-24 Completion of pumping arrangements 28-8-24 Boilers fixed 13-8-24 Engines tried under steam 6-9-24 Completion of fitting sea connections on 4th Rept Stern tube on 4th Rept Screw shaft and propeller 4-8-24 Main boiler safety valves adjusted 28-8-24 Thickness of adjusting washers S 3/8 F P 3/8 F P 3/8 F S 3/8 P 23/32 S 5/16 Lloyd do 191 Lloyd do 188 Lloyd do 188 Material of Crank shaft S Identification Mark on Do. WGM Lloyd do 2351 Material of Thrust shaft S Identification Mark on Do. 2351 WGM Lloyd do 188 Material of Tunnel shafts S Identification Marks on Do. 7091 1480 7093 Material of Screw shafts S Identification Marks on Do. 2351 WGM 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? No

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 for the record of L M C 9-24

It is submitted that this vessel is eligible for THE RECORD. + L M C. 9. 24. CL.

W. J. Kincaid 18/9/24

W. J. Kincaid Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : - : Special ... £ 42 : 5 : Donkey Boiler Fee ... £ : : Travelling Expenses (if any) £ : :

Committee's Minute GLASGOW 16 SEP 1924

Assigned + L M C 9.24

CERTIFICATE WRITTEN 17.9.24

