

REPORT ON MACHINERY.

No. 43772

Received at London Office

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Date of writing Report 20 June 1924 When handed in at Local Office 30 June 1924 Port of Glasgow
 To. in Survey held at Glasgow Date, First Survey 11th Jan'y Last Survey 20 June 1924
 Reg. Book. 16 June Number of Visits 20413 Gross Tons 8
 on the Steel screw steamer "DONA FLORA" Net Tons 8
 Master Built at Middlesbrough By whom built Furness S. B. C. N° 71 When built 1924
 Engines made at Glasgow By whom made Ross & Duncan N° 1136 when made 1924
 Boilers made at do By whom made Ross & Duncan N° 1703 when made 1924
 Registered Horse Power 1344 Owners Port belonging to
 Nom. Horse Power as per Section 28 1344 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 16" 26" 44" Length of Stroke 30" Revs. per minute as per rule 8.92 Material of screw shaft 8
 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 yes 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 yes If two
 liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 87 1/2"
 Dia. of Tunnel shaft 8.65" Dia. of Crank shaft journals 8.45" Dia. of Crank pin 8 3/8" Size of Crank webs 16 1/2 x 5 1/2" Dia. of thrust shaft under
 collars 8 1/2" Dia. of screw 11.0" Pitch of Screw 11.0" No. of Blades 4 State whether moveable no Total surface 42 sq. ft.
 No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 8 x 9 x 8 1/2" 6 x 4 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 @ 2 1/2" In Hold, &c. 2 @ 3"

No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes - 3 1/2"
 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 Hold suction How are they protected in pipes, covered 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 D. Colvill & Sons
 Total Heating Surface of Boilers 2337 Is Forced Draft fitted no No. and Description of Boilers 1. Horizontal
 Working Pressure 180 lbs Tested by hydraulic pressure to 320 Date of test 17.16.24 No. of Certificate 16533
 Can each boiler be worked separately yes Area of fire grate in each boiler 66.14 No. and Description of Safety Valves to
 each boiler 1 pair Spring loaded Area of each valve 7.66 sq. in. Pressure to which they are adjusted 180 Are they fitted with easing gear
 Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 15.6" Length 10.6" Material of shell plates 8
 Thickness 1 9/32" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.
 long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9" Lap of plates or width of butt straps 19 3/8"
 Per centages of strength of longitudinal joint 90.4 Working pressure of shell by rules 182.3 Size of manhole in shell 16" x 12"
 Size of compensating ring 31 1/2" x 29" No. and Description of Furnaces in each boiler 3. Horizontal Material 8 Outside diameter 47 1/8"
 Length of plain part top 19 1/2" bottom 19 1/2" Thickness of plates 19 1/2" Description of longitudinal joint weld No. of strengthening rings yes
 Working pressure of furnace by the rules 183 Combustion chamber plates: Material 8 Thickness: Sides 1 1/16" Back 5/8" Top 1 1/16" Bottom 1 1/16"
 Pitch of stays to ditto: Sides 10 3/8" x 8 1/2" Back 9 1/8" x 9" Top 10 3/8" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180
 Material of stays 8 Area at smallest part 1.73 sq. in. Area supported by each stay 88 sq. in. Working pressure by rules 185 End plates in steam space:
 Material 8 Thickness 1 1/16" Pitch of stays 19" x 18" How are stays secured D.N.L.W. Working pressure by rules 184 Material of stays 8
 Area at smallest part 6.10 sq. in. Area supported by each stay 342 sq. in. Working pressure by rules 196 Material of Front plates at bottom 8
 Thickness 1 3/16" Material of Lower back plate 8 Thickness 1 3/16" Greatest pitch of stays 18" Working pressure of plate by rules 193
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/8" x 4 1/2" Material of tube plates 8 Thickness: Front 1 1/16" x 1 1/16" Back 1 3/16" Mean pitch of stays 9" x 11 7/16"
 Pitch across wide water spaces 14" Working pressures by rules 202 Girders to Chamber tops: Material 8 Depth and
 thickness of girder at centre 8 1/4" x 1 1/2" Length as per rule 33 1/2" Distance apart 8 1/2" Number and pitch of stays in each 2-10 3/8"
 Working pressure by rules 184 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 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

002241-002248-0139

Register Foundation

IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? yes: Gls N° 43293

SPARE GEAR. State the articles supplied:— Two each of connecting rod, top-end, bottom-end and main bearing bolts & nuts: One set of coupling bolts & nuts: One set each of feed and bilge pump valves: assorted bolts & nuts: iron of various sizes: One main & one donkey feed check valve, one safety valve spring (2. Pk) and minor gear.

The foregoing is a correct description,

Ross Duncan

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1924 Jan 11. 15 Feb 6. 15-28 Mar 4. 6. 7 Apr 3. 10. 14 17. 24 May 1. 12. 22 Jun 2. 6. 19. 20
During erection on board vessel - - -
Total No. of visits 20

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " yes

Dates of Examination of principal parts—Cylinders 28.2.24 Slides 22.5.24 Covers 22.5.24 Pistons 22.5.24 Rods 22.5.24

Connecting rods 22.5.24 Crank shaft 17.4.24 Thrust shaft 10.4.24 Tunnel shafts ✓ Screw shaft 20.6.24 Propeller 20.6.24

Stern tube 20.6.24 Steam pipes tested 15.7.24 Engine and boiler seatings 16.6.24 Engines holding down bolts 10.7.24

Completion of pumping arrangements 26.7.24 Boilers fixed 26.7.24 Engines tried under steam 26.7.24

Completion of fitting sea connections 26.6.24 Stern tube 26.6.24 Screw shaft and propeller 1.7.24

Main boiler safety valves adjusted 26.7.24 Thickness of adjusting washers P. Valve $\frac{3}{8}$ f : S. Valve $\frac{1}{2}$ "

Material of Crank shaft S Identification Mark on Do. SC Material of Thrust shaft S Identification Mark on Do. SC

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts S Identification Marks on Do. SC

Material of Steam Pipes Solid drawn copper (4 3/4 x N° 6) Test pressure 400 lb

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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. These engines and boiler have been built under special survey in accordance with the Rules, and approved plans, the materials & workmanship are good.

The machinery is eligible in my opinion to be classed + L.M.C. with date when satisfactorily fitted on board, and tried under steam

The engines and boiler are being shipped to Trinidad where they will be fitted on board.

The engines, boilers and auxiliaries have now been satisfactorily secured on board in accordance with the Rules. Engines & Boilers examined under steam and safety valves adjusted

The machinery is now in a good and safe working condition and renders the vessel eligible in our opinion to have the notation of + L.M.C.-8.24 in the Register Book

The amount of Entry Fee ... £ 3 : - :
Special ... £ 26 : 16 :
Donkey Boiler Fee 1/5 ... £ 6 : 14 :
Travelling Expenses (if any) £ : :
When applied for, 27.6.1924
When received, 27.7.1924

Wm Morrison
Jas Cairns
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW -1 JUL 1924

Assigned Deferred

FRI 22 AUG 1924

+ L.M.C. 8.24 2020

C.L.
CERTIFICATE WRITTEN
Lloyd's Register Foundation