

REPORT ON MACHINERY.

No. 41244

Date of writing Report 20th July 1921. When handed in at Local Office 22nd July 1921. Port of Glasgow Received at London Office WED. JUL. 27 1921

No. in Survey held at Paisley & Brown Reg. Book. Date, First Survey 11-16-20 Last Survey 15th July 1921. (Number of Visits 25)

on the Steel Screw Steamer "CULMORE" Master Wm. Hamilton Built at Paisley By whom built Bon. McLachlan & Co. (N^o 391) Tons Gross 468.98 Net 180.92

Engines made at Paisley By whom made Bon. McLachlan & Co. (N^o 3780) when made 1921

Boilers made at do: By whom made do: (N^o 1093) when made 1921

Registered Horse Power Owners McDevette & Donnell Port belonging to Londonderry

Nom. Horse Power as per Section 28 96 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 20" x 42" Length of Stroke 24" Revs. per minute 100 Dia. of Screw shaft as per rule 8.2" Material of screw shaft as fitted 8 1/2" Steel

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 2'-9"

Dia. of Tunnel shaft as per rule 8.03" Dia. of Crank shaft journals as fitted 8 1/8" Dia. of Crank pin 8 1/2" Size of Crank webs 16 1/2" x 6" Dia. of thrust shaft under collars 8 1/8" Dia. of screw 9'-0" Pitch of Screw 10'-6" No. of Blades 4 State whether moveable No Total surface 34 ft²

No. of Feed pumps 2 Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 6 1/2 x 6" & 7 x 9 x 8" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 @ 3" diam. In Holds, &c. 2 in each hold @ 3" diam.

No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 3"

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 Yes

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 None How are they protected Yes

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 Indef. Aft. Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel N. Beardmore & Co. Ltd. Steel Coy of Scotland

Total Heating Surface of Boilers 1811 ft² Is Forced Draft fitted No No. and Description of Boilers one SE Return Tube

Working Pressure 125 Tested by hydraulic pressure to 237 lbs. Date of test 11.3.21 No. of Certificate 15740

Can each boiler be worked separately Yes Area of fire grate in each boiler 52.5 No. and Description of Safety Valves to each boiler 2 Spring Loaded Area of each valve 8.29 in² Pressure to which they are adjusted 130 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 3'-0" Int. Mean dia. of boilers 13.6 Length 10-7 1/16 Material of shell plates S

Thickness 13/16 Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double long. seams Jr. butt Diameter of rivet holes in long. seams 29/32 Pitch of rivets 6 3/8 Lap of plates or width of butt straps 13 1/2

Per centages of strength of longitudinal joint rivets 95.2 plate 85.7 Working pressure of shell by rules 129 Size of manhole in shell none

Size of compensating ring Yes No. and Description of Furnaces in each boiler 3 Morrison Material S Outside diameter 42 7/8

Length of plain part top bottom Thickness of plates crown bottom 7/16 Description of longitudinal joint welded No. of strengthening rings none

Working pressure of furnace by the rules 145 Combustion chamber plates: Material S Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 9/16

Pitch of stays to ditto: Side 9 x 9 1/2 Back 9 x 9 1/2 Top 8 x 9 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 127

Material of stays S Area at smallest part 1.5 Area supported by each stay 85.6 Working pressure by rules 147 End plates in steam space: Material S Thickness 1 Pitch of stays 2 1/4 x 1/6 How are stays secured d. nuts Working pressure by rules 131 Material of stays S

Area at smallest part 2.5 Area supported by each stay 340 Working pressure by rules 130 Material of Front plates at bottom S

Thickness 13/16 Material of Lower back plate S Thickness 13/16 Greatest pitch of stays 15 Working pressure of plate by rules 125

Diameter of tubes 3 Pitch of tubes 4 Material of tube plates S Thickness: Front 13/16 Back 19/32 Mean pitch of stays 8

Pitch across wide water spaces 13 1/2 Working pressures by rules 132 Girders to Chamber tops: Material S Depth and thickness of girder at centre 2(7 x 7/8) Length as per rule 30 Distance apart 8 Number and pitch of stays in each 2-9 1/2

Working pressure by rules 148 Steam dome: description of joint to shell None fitted % of strength of joint Yes

Diameter Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes

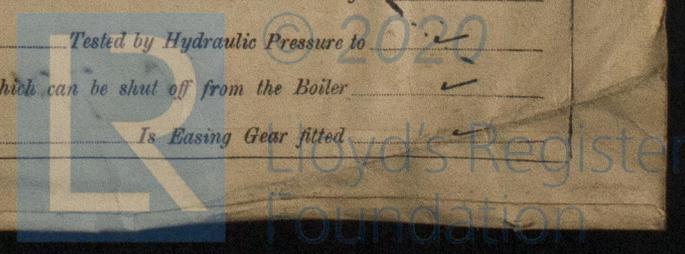
Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

SUPERHEATER. Type None fitted Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes

Date of Test Yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Diameter of Safety Valves Yes Pressure to which each is adjusted Yes Is Easing Gear fitted Yes

MS80-0025



IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

6 - connecting rod top-end bolts & nuts.
6 - connecting rod bottom-end bolts & nuts.
2 - main bearing studs with nuts.
1 set - coupling bolts & nuts.
1 set - feed & bilge pump valves.
A quantity of assorted bolts & nuts and
Iron of various sizes.

The foregoing is a correct description,

BOW, M. LACHLAN & CO. LTD.

J. Macdonald

DIRECTOR Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1920 Oct 11. Nov 9. 12. 18. 23. Dec 1. 7. 20. 1921 Jan 10. 13. 17. 21. 27. Feb 8. 18. 22.
During erection on board vessel - - - Mar 1. 8. 11. 14. 18 Apr 12. 29. May 10. July 15
Total No. of visits 25.

Is the approved plan of main boiler forwarded herewith Yes.

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 1/12/20 Slides 18/4/20 Covers 1/12/20 Pistons 7/12/20 Rods 20/12/20

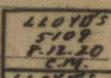
Connecting rods 23/11/20 Crank shaft 1/12/20 Thrust shaft 8/12/20 Tunnel shafts None. Screw shaft 8/12/20 Propeller 18/3/21.

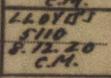
Stern tube 18/2/21. Steam pipes tested 12/4/21 Engine and boiler seatings 11/3/21 Engines holding down bolts 18/3/21.

Completion of pumping arrangements 18/3/21 Boilers fixed 29/4/21 Engines tried under steam 15/7/21

Completion of fitting sea connections 11/3/21 Stern tube 11/3/21 Screw shaft and propeller 11/3/21

Main boiler safety valves adjusted 29/4/21 Thickness of adjusting washers 0. 1/2" : 5. 1/4"

Material of Crank shaft Steel Identification Mark on Do.  Material of Thrust shaft Steel Identification Mark on Do. 

Material of Tunnel shafts None fitted Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 

Material of Steam Pipes Solid Drawn Steel Test pressure 375 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 No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. These engines & boilers have been

built under special survey; the materials & workmanship are of good classification; they have been well fitted on board and tried under steam with satisfactory results.

This machinery is, in our opinion, eligible to have notification of L.M.C. 7, 21 in the Register Book.

It is suggested that this vessel is eligible for THE RECORD + L.M.C. 7.21. CL.

Roll

29/7/21

ARR

The amount of Entry Fee ... £ 2 : - :
Special ... £ 24 : - :
Donkey Boiler Fee ... £ - : - :
Travelling Expenses (if any) £ - : 15/-

When applied for, 22.7.19.21.

When received, 1.8.21.

C. Marshall & J.D. Boyle
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 26 JUL 1921

Assigned + L.M.C. 7.21.

3/8/21
dated 27/7/21



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Certificates (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.

GLASGOW