

REPORT ON MACHINERY.

No. 8865.

WED.

Received at London Office

Date of writing Report 19 When handed in at Local Office 24/6/19 Port of Glasgow

No. in Survey held at Paisley Date, First Survey 8/4/18 Last Survey 12/6/1919

Reg. Book. 4 Sup. on the S.S. "MOYALLON"

(Number of Visits 34)

Tons Gross 382 Net 154 140

Master Built at Paisley By whom built John Fullerton & Co (412) When built 1919

Engines made at Paisley By whom made Campbell & Calderwood (958) when made 1919

Boilers made at Renfrew By whom made Wm Simons & Co (624) when made 1919

Registered Horse Power Owners John Kelly Ltd Port belonging to Belfast

Com. Horse Power as per Section 28 82 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Compound No. of Cylinders two No. of Cranks two

Dia. of Cylinders 18"-38" Length of Stroke 24" Revs. per minute 100 Dia. of Screw shaft as per rule 8.13 as fitted 8 3/8" Material of screw shaft 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

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 No

If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 2'-9 1/2"

Dia. of Tunnel shaft as per rule 7.52 as fitted 8 1/8" Dia. of Crank shaft journals as per rule 7.89 as fitted 8 1/4" Dia. of Crank pin 8 1/4" Size of Crank webs 5 1/2" x 5 1/2" Dia. of thrust shaft under

pins 8 1/8" Dia. of screw 9-6" Pitch of Screw 12'-6" No. of Blades 4 State whether moveable No. Total surface 35 1/2 sq ft

No. of Feed pumps one Diameter of ditto 2 1/8" Stroke 13 1/2" Can one be overhauled while the other is at work —

No. of Bilge pumps one Diameter of ditto 2 1/8" Stroke 13 1/2" Can one be overhauled while the other is at work —

No. of Donkey Engines two Sizes of Pumps Ballast 6" x 6" x 6" General 5" x 3 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 2 at 2" dia. In Holds, &c. For'd Hold 2 at 2 1/4" dia.

No. of Bilge Injections one sizes 4 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size one 2" dia

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 Section 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

Dates of examination of completion of fitting of Sea Connections 14. 4. 19 of Stern Tube 14. 4. 19 Screw shaft and Propeller 14. 4. 19

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door — worked from —

MANIFOLDERS, &c.—(Letter for record 5.) Manufacturers of Steel The Steel Company of Scotland & D. Colville & Sons

Total Heating Surface of Boilers 1486 sq ft Is Forced Draft fitted No. No. and Description of Boilers one Single Ended

Working Pressure 130 lbs/sq" Tested by hydraulic pressure to 260 lbs/sq" Date of test 19.12.18 No. of Certificate 14566

Can each boiler be worked separately — Area of fire grate in each boiler 49.45 sq ft No. and Description of Safety Valves to

boiler Pair Spring loaded Area of each valve 7.06 sq" Pressure to which they are adjusted 135 lbs/sq" Are they fitted with easing gear Yes

Least distance between boilers or uptakes and bunkers or woodwork 5'-0" Mean dia. of boilers 13'-0" Length 10'-0" Material of shell plates Steel

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

No. of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Thickness of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

No. of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter 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

Distance across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

Thickness of girders at centre Length as per rule Distance apart Number and pitch of stays in each

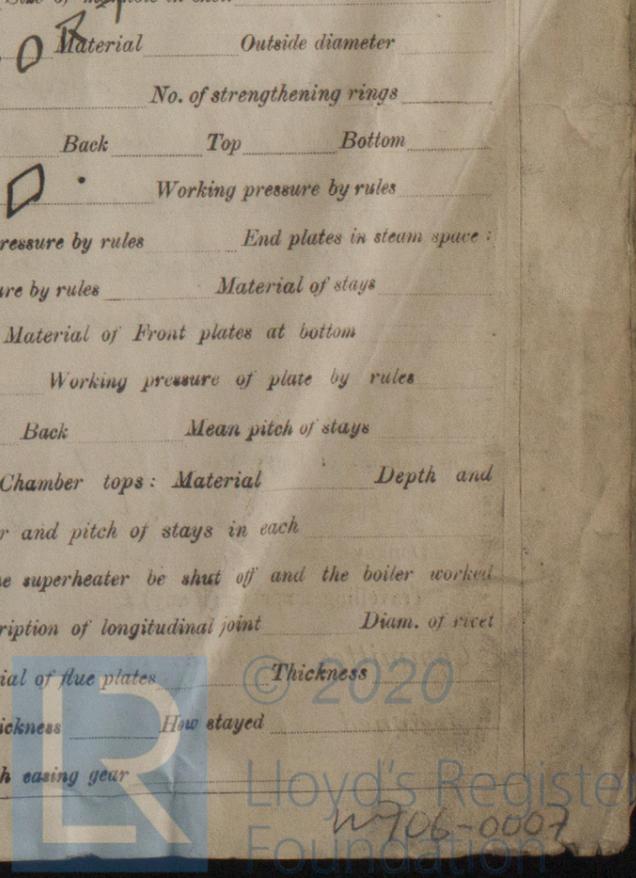
Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

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

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

Reinforced with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with casing gear _____ If steam from main boilers can enter the donkey boiler Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____ Rivets _____ Plates _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 2 crosshead bearing bolts & nuts, 2 crank pin bearing bolts & nuts, 2 main bearing bolts & nuts, 1 set of feed & bilge pump valves, 6 coupling bolts, assorted bolts & nuts, a quantity of assorted iron & other spares as per specification.

The foregoing is a correct description,

Manufacturer. *Campbell & Cadwood*

Dates of Survey while building	During progress of work in shops	1918 Apr 10-21, May 10-21, June 7-13, July 10-29, Sept 20, Oct 1-10, 30, Nov 4-25, 29, Dec 12-16.
	During erection on board vessel	1919 Jan 10-15, 20-23, 29, Feb 14-21, Mar 13-18, 31, Apr 14-17, 22-30, May 14-19, June 5-12.
	Total No. of visits	311

Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts	Cylinders	10. 10. 18	Slides	25. 11. 18	Covers	10. 10. 18	Pistons	12. 12. 18	Rods	12. 12. 18
	Connecting rods	12. 12. 18	Crank shaft	21. 2. 19	Thrust shaft	21. 2. 19	Tunnel shafts	-	Screw shaft	21. 2. 19
	Stern tube	16. 12. 18	Steam pipes tested <i>see below</i>	Engine and boiler seatings	14. 4. 19	Engines holding down bolts	14. 5. 19			
	Completion of pumping arrangements	12. 6. 19	Boilers fixed	5. 6. 19	Engines tried under steam	12. 6. 19				
	Main boiler safety valves adjusted	5. 6. 19	Thickness of adjusting washers	Port Valve $\frac{1}{32}$ "	Std Valve $\frac{1}{16}$ "					
	Material of Crank shaft	Steel	Identification Mark on Do.	No 958 21. 2. 19 FAF	Material of Thrust shaft	Steel	Identification Mark on Do.	No 95 21. 2. 19 FAF		
	Material of Tunnel shafts	-	Identification Marks on Do.	-	Material of Screw shafts	Steel	Identification Marks on Do.	No 95 21. 2. 19 FAF		
	Material of Steam Pipes	Lap welded hot iron			Test pressure	540 lbs				

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

The machinery has been built under special survey in accordance with the Rules + approved plans, the materials and workmanship are good. It has been securely fitted into the vessel & with satisfactory results has been tested under steam. It is in my opinion, suitable for Classification with record $\frac{1}{2}$ LMC 6.19.

Note. Through an oversight on the part of the builders the main steam pipes were fitted by us at the makers works, and this was only discovered after they were fitted in place and ready for steam. A certificate of test by the pipe maker (The Scottish Tube Co. Ltd) is attached, and it is submitted this may be accepted under the circumstances.

It is submitted that
this vessel is eligible for
THE RECORD + LMC 6.19.

The amount of Entry Fee .. £ 1 : : When applied for, 23. 6. 19.

Special .. £ 12 : 6 : : When received, 29 Feb 1919

Donkey Boiler Fee .. £ : : : : : 29 Feb 1919

Travelling Expenses (if any) £ : : : : : 29 Feb 1919

Committee's Minute GLASGOW 24 JUN 1919

Assigned + LMC 6.19

Machinery Certificate
ENTERED 27.7.19

Harry Clarke
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

WEB-FR
WEB-FR
WEB-FR
BRACKET Web Fr
BULKHEAD
W.T.BULL
COLLIS PARTITION LONGITUDINAL
Are the outers
Are the Sluice
STR
FLAT PLATE (If Bar Keel, & GARBOARD COVERED)
State actual thickness in wa. of Double Bottom.
M.D. Sheer
GDK - "

Write "Bridge Sheer Strake" and "Upper Deck Sheer Strake" opposite the corresponding letter.

THICKNESS OF SHEER CLEAR OF LONG DO. OF STRAKE
DBLG. of Flat Plate
Sheer Length and thickness
PEEP SIDES
SHORT BRIDGE
FORECASTLE SIDING

MAIN Upper Deck Stringer Plate
Quart. Second Deck Stringer Plate

FRAMES extended REVERSED FR

LOWER MASTS...
Bowsprit
Topmasts, Yards
Rigging, Material
Sails.

Form No. 1A

Certificate (if required) to be sent to

