

# REPORT ON MACHINERY.

No. 17446

WED. 30 APR. 1919

Received at London Office

Date of writing Report 23<sup>rd</sup> April, 1919. When handed in at Local Office 23<sup>rd</sup> April, 1919. Port of Greenock.  
 No. in Survey held at Port - Glasgow. Date, First Survey 8<sup>th</sup> Jan'y, 1919. Last Survey 12<sup>th</sup> Feb'y, 1919.  
 Reg. Book. on the Steel Screw Steamship "Clan Matheson" (Number of Visits 3.) Tons { Gross 5612.76.  
 Master J. Redford. Built at Port - Glasgow By whom built Wm Hamilton & Co Ltd When built 1919.  
 Engines made at Glasgow. By whom made D. Rowan & Co. when made  
 Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made  
 Registered Horse Power \_\_\_\_\_ Owners The Clan Line Steamers, Ltd., Port belonging to Glasgow.  
 Nom. Horse Power as per Section 28 \_\_\_\_\_ Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

## ENGINES, &c.—Description of Engines

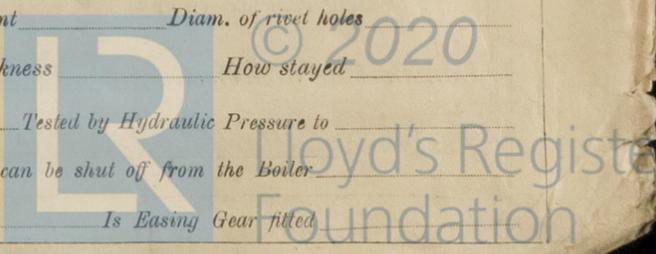
Description of Engines			No. of Cylinders	No. of Cranks
Dia. of Cylinders	Length of Stroke	Revs. per minute	Dia. of Screw shaft	Material of screw shaft
Is the screw shaft fitted with a continuous liner the whole length of the stern tube			Is the after end of the liner made water tight	
Is the propeller boss _____ If the liner is in more than one length are the joints burned _____			If the liner does not fit tightly at the part _____	
Is the space between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive _____			If two _____	
If liners are fitted, is the shaft lapped or protected between the liners _____			Length of stern bush _____	
Dia. of Tunnel shaft	Dia. of Crank shaft journals	Dia. of Crank pin	Size of Crank webs	Dia. of thrust shaft under
Collars	Dia. of screw	Pitch of Screw	No. of Blades	State whether moveable
No. of Feed pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps		
Engine Room	In Holds, &c.			

No. of Bilge Injections \_\_\_\_\_ sizes \_\_\_\_\_ Connected to condenser, or to circulating pump \_\_\_\_\_ Is a separate Donkey Suction fitted in Engine room & size \_\_\_\_\_  
 Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses in Engine room always accessible \_\_\_\_\_ 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 \_\_\_\_\_ Are the Discharge Pipes above or below the deep water line \_\_\_\_\_  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel \_\_\_\_\_ Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes  
 What pipes are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_  
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges \_\_\_\_\_  
 Is the Screw Shaft Tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

## BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers	Is Forced Draft fitted	No. and Description of Boilers
Working Pressure	Tested by hydraulic pressure to _____	Date of test _____ No. of Certificate _____
Can each boiler be worked separately	Area of fire grate in each boiler _____	No. and Description of Safety Valves to _____
Area of each valve _____	Pressure to which they are adjusted _____	Are they fitted with easing gear _____
Smallest distance between boilers or uptakes and bunkers or woodwork _____	Mean dia. of boilers _____	Length _____ Material of shell plates _____
Thickness _____ Range of tensile strength _____	Are the shell plates welded or flanged _____ Descrip. of riveting: cir. seams _____	
Long. seams _____ Diameter of rivet holes in long. seams _____	Pitch of rivets _____	Lap of plates or width of butt straps _____
Per centages of strength of longitudinal joint _____	Working pressure of shell by rules _____	Size of manhole in shell _____
Size of compensating ring _____	No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____	
Length of plain part _____	Thickness of plates _____	Description of longitudinal joint _____ No. of strengthening rings _____
Working pressure of furnace by the rules _____	Combustion chamber plates: Material _____	Thickness: Sides _____ Back _____ Top _____ Bottom _____
Pitch of stays to ditto: Sides _____	Back _____ Top _____	If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____
Material of stays _____	Area 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 _____
Area 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 _____
Pitch across wide water spaces _____	Working pressures by rules _____	Girders to Chamber tops: Material _____ Depth and _____
Thickness of girder at centre _____	Length as per rule _____	Distance apart _____ Number and pitch of stays in each _____
Working pressure by rules _____	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?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building (1919) Jan: 8-24 Feb: 12:- 3.

Is the approved plan of main boiler forwarded herewith

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

Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller

Stern tube Steam pipes tested Engine and boiler seatings 18-2-19 Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Completion of fitting sea connections 18-2-19 Stern tube 18-2-19 Screw shaft and propeller 18-2-19

Main boiler safety valves adjusted Thickness of adjusting washers

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

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes Test pressure

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 If so, state name of vessel

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

Vessel taken to Glasgow to have machinery fitted.

Table with columns: The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any), When applied for, When received.

Committee's Minute GLASGOW 29 APR 1919

Assigned See Glasgow Rpt. 38681

Graham Robertson Engineer Surveyor to Lloyd's Register of Shipping.



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Rpt. 5a.

Date of writing Report

No. in Survey held Reg. Book.

on the

Master

Engines made at Donkey Boilers made at

Registered Horse Power

MULTITUBULAR

(Letter for record

Boilers

No. of Certificate 14

safety valves to each boiler

Are they fitted with eas

Smallest distance betwe

Material of shell plate

Descrip. of riveting: c

Lap of plates or width

rules 100 Siz

boiler 2 Plain

Description of longitudi

plates: Material Sta

Top 12x8 2 If stays a

smallest part 1 2 2 A

Pitch of stays 26x14 5

Area supported by each

Lower back plate Sta

Pitch of tubes 4 3/8 x 4

water spaces 14 1/4

girder at centre 6 3/4

Working pressure by ru

separately Dia

holes Pitch of riv

If stiffened with rings

Working pressure of en

Dates of Survey while building During progress work in shops During erection board vessel

GENERAL REM

built under and work

Survey Fee Travelling Expenses

Committee's Minute Assigned See

Certificate (if required) to be sent to

28.4.19