

## 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.)  
Master J. Redford. Built at Port - Glasgow By whom built Wm Hamilton & Co Ltd Tons { Gross 5612.76.  
Engines made at Glasgow. By whom made D. Rowan & Co when made { Net 3452.60.  
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, &amp;c.—Description of Engines

No. of Cylinders

No. of Cranks

Dia. of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ Revs. per minute \_\_\_\_\_ Dia. of Screw shaft \_\_\_\_\_ as per rule \_\_\_\_\_ Material of \_\_\_\_\_ as fitted \_\_\_\_\_ 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 \_\_\_\_\_  
Is the shaft lapped or protected between the liners \_\_\_\_\_ Length of stern bush \_\_\_\_\_  
Dia. of Tunnel shaft \_\_\_\_\_ as per rule \_\_\_\_\_ Dia. of Crank shaft journals \_\_\_\_\_ as per rule \_\_\_\_\_ Dia. of Crank pin \_\_\_\_\_ Size of Crank webs \_\_\_\_\_ Dia. of thrust shaft under \_\_\_\_\_ as fitted \_\_\_\_\_  
Collars \_\_\_\_\_ Dia. of screw \_\_\_\_\_ Pitch of Screw \_\_\_\_\_ No. of Blades \_\_\_\_\_ State whether moveable \_\_\_\_\_ Total surface \_\_\_\_\_  
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, &amp;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 \_\_\_\_\_  
Each boiler \_\_\_\_\_ 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 \_\_\_\_\_ rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Size of manhole in shell \_\_\_\_\_ plate \_\_\_\_\_  
Size of compensating ring \_\_\_\_\_ No. and Description of Furnaces in each boiler \_\_\_\_\_ Material \_\_\_\_\_ Outside diameter \_\_\_\_\_  
Length of plain part \_\_\_\_\_ top \_\_\_\_\_ Thickness of plates \_\_\_\_\_ crown \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ No. of strengthening rings \_\_\_\_\_ bottom \_\_\_\_\_  
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 { During progress of work in shops -- (1919) Jan. 8-24 Feb. 12-13  
During erection on board vessel -- }  
Total No. of visits 3.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

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.

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

The amount of Entry Fee ... £ :  
Special ... £ :  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ :  
When applied for, 19.  
When received, 19.

Committee's Minute GLASGOW 29 APR 1919

Assigned See Glasgow Rpt. 38681

Graham Robertson

Engineer Surveyor to Lloyd's Register of Shipping.

Rpt. 5a.

Date of writing Report

No. in Survey held Reg. Book.

on the

Master

Engines made at  
Boilers made at

Registered Horse Power

MULTITUBULAR

(Letter for record

Boilers one

No. of Certificate 14

safety valves to each boiler

Are they fitted with eas

Smallest distance between

Material of shell plate

Descrip. of riveting: c

Lap of plates or width

rules 100 Siz

boiler 2 Plain

Description of longitudinal

plates: Material Steel

Top 12x8 1/2 If stays

smallest part 1 1/2 2 1/2

Pitch of stays 26x14 1/2

Area supported by each

Lower back plate Steel

Pitch of tubes 4 3/8 x 4

water spaces 14 1/4

girder at centre 6 3/4

Working pressure by rule

separately Dia

holes Pitch of riv

If stiffened with rings

Working pressure of en

Dates of Survey while building { During progress of work in shops  
During erection on board vessel -- }

GENERAL REM

built under  
and work

Survey Fee  
Travelling Expenses

Committee's Minute  
Assigned See



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