

REPORT ON MACHINERY.

No. 23350

Port of Glasgow

Received at London Office WES. 12 DEC 1905

No. in Survey held at Glasgow Date, first Survey 29th May Last Survey 4th Dec 1905

Reg. Book. S.S. Journaline on the (Number of Visits)

Master _____ Built at Glasgow By whom built Mackie & Thompson When built 1905

Engines made at Coathbridge By whom made W. & V. Dickenson when made 1905

Boilers made at Glasgow By whom made Finlay Burnett when made 1905

Registered Horse Power _____ Owners _____ Port belonging to Dull

Nom. Horse Power as per Section 28 88 Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c. — Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders X2-22-37 Length of Stroke 27 Revs. per minute _____ Dia. of Screw shaft 7.8 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 in 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 _____ If two liners are fitted, is the shaft lapped for protected between the liners _____ Length of stern bush 3'-6"

Dia. of Tunnel shaft 6.87 Dia. of Crank shaft journals 7.25 Dia. of Crank pin 7.578 Size of Crank webs 14 1/2 x 5 Dia. of thrust shaft under collars 7.578 Dia. of screw 9'-8" Pitch of screw 12'-6" No. of blades 4 State whether moveable No Total surface 35.5 sq

No. of Feed pumps 1 Diameter of ditto 3" Stroke 13 1/2 Can one be overhauled while the other is at work _____

No. of Bilge pumps 1 Diameter of ditto 3 Stroke 13 1/2 Can one be overhauled while the other is at work _____

No. of Donkey Engines 1 Sizes of Pumps 3 1/2 x 6 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps _____

In Engine Room 2-2' In Holds, &c. 4-2'

No. of bilge injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump Cond. Is a separate donkey suction fitted in Engine room & size 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 _____

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 4 2" 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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock _____ Is the screw shaft tunnel watertight _____

Is it fitted with a watertight door _____ worked from _____

BOILERS, &c. — (Letter for record S) Total Heating Surface of Boilers 1460 sq Is forced draft fitted No

No. and Description of Boilers 1 SE Multitubular Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs

Date of test 4-11-05 Can each boiler be worked separately _____ Area of fire grate in each boiler 44.3 sq No. and Description of safety valves to each boiler 2 Spring Area of each valve 4.9 sq Pressure to which they are adjusted 205 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 13'-1" Length 10.6 Material of shell plates Steel

Thickness 1 3/16 Range of tensile strength 28-32 Are they welded or flanged No Descrip. of riveting: cir. seams Double Riv. long. seams Yrb. riveted

Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 7/8" Lap of plates or width of butt straps 1' 6 1/2" x 1 1/8" x 1 1/8"

Per centages of strength of longitudinal joint rivets 86.5 Working pressure of shell by rules 203 lb Size of manhole in shell 16" x 12"

Size of compensating ring 5 3/4 x 1 3/16 No. and Description of Furnaces in each boiler Three, plain Material Steel Outside diameter 37"

Length of plain part 7.6 Thickness of plates 4 9/16 Description of longitudinal joint Welded No. of strengthening rings None

Working pressure of furnace by the rules 208 Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 2 1/32" Top 2 1/32" Bottom 1 1/16"

Pitch of stays to ditto: Sides 8 3/4 x 8 Back 8 1/2 x 8 1/4 Top 8 3/4 x 8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 206

Material of stays Steel Section Diameter at smallest part 2.02 Area supported by each stay 72.2 Working pressure by rules 200 lb End plates in steam space: 2.35 Back margin 86.5

Material Steel Thickness 1 9/32 Pitch of stays 18 3/4 x 19 How are stays secured Double nuts Working pressure by rules 214 lb Material of stays Steel

Section Diameter at smallest part 8.11 Area supported by each stay 356 Working pressure by rules 227 Material of Front plates at bottom Steel

Thickness 1" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 12 1/2 x 13 Working pressure of plate by rules 214

Diameter of tubes 3 1/2" Pitch of tubes 11 3/4" Material of tube plates Steel Thickness: Front 1" Back 7/8" Mean pitch of stays 11 1/2"

Pitch across wide water spaces 13 3/4" Working pressures by rules 207 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 x 7/8 x 2 Length as per rule 34 1/2 Distance apart 6" Number and pitch of Stays in each Three at 8"

Working pressure by rules 256 Superheater or Steam chest; how connected to boiler _____ Can the superheater be shut off and the boiler worked separately _____

Diameter _____ Length _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____ Pitch of rivets _____ Working pressure of shell by rules _____ Diameter of flue _____ Material of flue plates _____ Thickness _____

If stiffened 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 _____

DONKEY BOILER— No. Description

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves

No. of safety valves Area of each Pressure to which they are adjusted If fitted with easing 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 Dia. of rivet holes Whether punched or drilled Pitch of rivets

Lap of plating Percentage of strength of joint Rivets 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

Thickness of furnace crown plates Stayed by Working pressure of shell by rules

Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:— 2 Top end connecting rod bolts 2 ditto bottom end 2 Main bearing bolts 6 coupling bolts 4 valves for feed & discharge pumps Bolts & nuts assorted & spares as per rules

The foregoing is a correct description,
for W V V Lidpurwalla
Manufacturer.

Dates of Survey while building

During progress of work in shops—	1905: May 29. June 6. 14. July 12. Aug 11. 21. 29. Sep 19. 27. Oct 4. 16.
During erection on board vessel—	Nov 2. 3. 4. 7. 11. 15. 17. Dec 4.
Total No. of	s 19.

Is the approved plan of main boiler forwarded herewith **Yes**

“ “ “ donkey “ “ “

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

The Engines & boilers of this vessel have been constructed under special survey & the materials & workmanship are found to be good. The engines have been tried under steam & the safety valves have been adjusted to the working pressure. The Machinery is now in good & safe working condition & eligible in my opinion to have the notation of + L. M. C. 11.05 (imp red) in the Register books.

It is submitted that this vessel is eligible for THE RECORD.

L.M.C. 12.05

12.1.06

Certificate (if required) to be sent to Committee's Minute.

The amount of Entry Fee. £ 1 : : When applied for, 11 DEC 1905

Special .. £ 13 : 4 : : When received, 30 DEC 1905

Donkey Boiler Fee .. £ : : : :

Travelling Expenses (if any) £ : : : :

11.1.06
12.1.06
Thos. L. Shouton
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Glasgow 11 DEC 1905

Committee's Minute

Assigned + L.M.C. 12.05.

