

REPORT ON MACHINERY.

No. 14249

MON. MAR 16 1896

Port of Glasgow

To. in Survey held at Glasgow

Date, first Survey 15 Feb 94

Received at London Office 11 March 1896

Book. 30 on the S.S. Pathan

Master John Day Built at Glasgow By whom built Aitken & Mansel

Gross 2709
Net 1762

When built 1883

Engines made at Glasgow By whom made J. & J. Thomson when made 1883

Boilers made at Glasgow By whom made J. & J. Thomson when made 1883

Donkey boiler made at Glasgow " " Barclay Curle & Co when made 1896

Registered Horse Power 351 Owners Argyle & Ship Co Ltd Port belonging to Rocheater

Nom. Horse Power as per Section 28

ENGINES, &c.— Description of Engines _____ No. of Cylinders _____

Diameter of Cylinders _____ Length of Stroke _____ Revolutions per minute _____ Diameter of Screw shaft _____
as per rule _____ as fitted _____

Diameter of Tunnel shaft _____ Diameter of Crank shaft journals _____ Diameter of Crank pin _____ Size of Crank webs _____
as per rule _____ as fitted _____

Diameter 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 _____

In 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 _____ Are they Valves or Cocks _____

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 _____

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 _____

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 _____

DONKEY BOILER, &c.— (Letter for record _____) Total Heating Surface of Boilers _____

No. and Description of Boilers one flat sided multitubular Working Pressure 50 Tested by hydraulic pressure to 100

Date of test 19/2/96 Can each boiler be worked separately Area of fire grate in each boiler 16 sq ft No. and Description of safety valves to each boiler two direct spring Area of each valve 4.91 sq in Pressure to which they are adjusted 50 lbs Are they fitted with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork near bilge Mean diameter of boilers 9'-6" x 5'-0"

Length 7'-2" Material of shell plates Steel Thickness 7/16" Description of riveting: circum. seams single & lap long. seams double & lap

Diameter of rivet holes in long. seams 13/16" Pitch of rivets 2 1/16" Lap of plates or width of butt straps 1 1/8"

Per centages of strength of longitudinal joint _____ rivets 72 Working pressure of shell by rules 109 Size of manhole in shell 12" x 16"

Size of compensating ring 4 1/2" x 9 1/16" No. and Description of Furnaces in each boiler one plain Material Steel Outside diameter 44 7/16"

Length of plain part _____ top 4'-9" Thickness of plates _____ crown 7/16" Description of longitudinal joint welded No. of strengthening rings none

Working pressure of furnace by the rules 77 Combustion chamber plates: Material Steel Thickness: Sides 7/16" Back 7/16" Top 7/16" Bottom 7/16"

Pitch of stays to ditto: Sides 8 3/4" Back 8 1/2" Top 8 3/4" x 7 1/2" If stays are fitted with nuts or riveted heads riveted heads Working pressure by rules 58

of stays Steel Diameter at smallest part 9.60" Area supported by each stay 76 sq in Working pressure by rules 106 End plates in steam space: _____

_____ Diameter at smallest part 14.50" Area supported by each stay 225 sq in Working pressure by rules 64 Material of Front plates at bottom Steel

Thickness 7/16" Material of Lower back plate 9/16" Steel Thickness 9/16" Greatest pitch of stays 8 1/2" Working pressure of plate by rules 58

Diameter of tubes 3 3/4" Pitch of tubes 14 3/8" Material of tube plates Steel Thickness: Front 9/16" Back 9/16" Mean pitch of stays 11"

Pitch across wide water spaces 11" Working pressures by rules 174 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 4 x 2 1/2" Length as per rule 19" Distance apart 7 1/2" Number and pitch of Stays in each two 8 3/4"

Working pressure by rules 78 Superheater or Steam chest; how connected to boiler none 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 _____

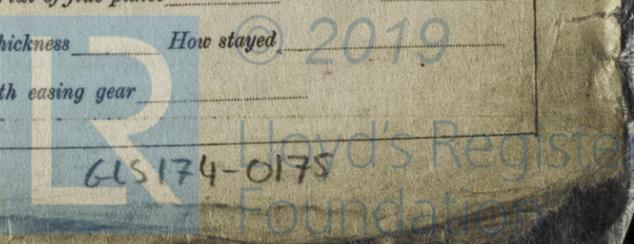
If stiffened with rings _____ Distance between rings _____ Working pressure by rules _____ End plates: Thickness _____ How stayed _____

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

If not, state whether, and when, one will be so.

Is a Report also sent on the Hull of the Ship?

[142.-L.R.P.H.-2,000.-F. 6/9/94.-Copyright Ink.]



14279 gcs

DONKEY BOILER— Description *See other side*

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 enter the donkey boiler _____

Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____

Description of riveting long. seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____

Lap of plating _____ Per centage 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:—

The foregoing is a correct description,
Manufacturer.

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

This boiler has been built under the usual conditions of special survey and has been satisfactorily tested by hydraulic pressure to one hundred pounds per square inch. The material and workmanship being of good quality.

This boiler has now been fitted on board in a satisfactory manner and the safety valves adjusted under steam to fifty pounds per square inch.

It is submitted that the donkey boiler notation now in register book be expunged, and fresh notation of R.D.B. 96 inserted.

Certificate (if required) to be sent to _____

The amount of Entry Fee. £	:	:	When applied for,
Special £	:	:	11/31 96
Donkey Boiler Fee £	2	2	When received,
Travelling Expenses (if any) £	:	:	13/31 96

George Murdoch James Morrison
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES, MAR 17 1896

TUES, MAR 24 1896

Assigned _____

(The Directors are requested not to write on or below the space for Committee's Minutes.)



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