

REPORT ON MACHINERY.

No. 14,249

MON. MAR 16 1896

Port of Glasgow

To. in Survey held at Glasgow
Book.

Date, first Survey 15 Feb 94

Received at London Office

Last Survey 11 March 1896

30 on the S S Pathan

Master John Day

Built at Glasgow

By whom built Aitken & Mansel

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

Contract boiler made at Glasgow

" " Barclay Curle & Co

when made 1896

Registered Horse Power 351

Owners Argyll Ship Co Ltd

Port belonging to Rochester

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

DONKEY BOILER, &c.—		(Letter for record)	Total Heating Surface of Boilers
No. and Description of Boilers	one flat sided multitubular	Working Pressure	50
Date of test	19/2/96	Can each boiler be worked separately	✓
Area of fire grate in each boiler	16 ft	No. and Description of safety valves to each boiler	two direct spring
Area of each valve	4.91 ft	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 boiler
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	1 3/16"
Pitch of rivets	2 1/16"	Lap of plates or width of butt straps	1 1/8"
Per centages of strength of longitudinal joint	72	Working pressure of shell by rules	109 lbs
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	4-9"	Thickness of plates	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	Diameter of stays	Steel
Diameter at smallest part	960"	Area supported by each stay	760"
Working pressure by rules	106	End plates in steam space:	
Material	Steel	Thickness	9/16"
Pitch of stays	12 x 15"	How are stays secured	double nuts
Working pressure by rules	63	Material of stays	Steel
Diameter at smallest part	1450"	Area supported by each stay	2250"
Working pressure by rules	64	Material of Front plates at bottom	Steel
Thickness	9/16"	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 12 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?

-6/9/94.-Copyright Ink.

645174-0175

Lloyd's Register Foundation

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.

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

Certificate (if required) to be sent to _____

The amount of Entry Fee. £	:	:	When applied for,	<i>George Murdoch James Morrison</i> Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Special £	:	:	11/3/96	
Donkey Boiler Fee £	2	2	When received,	
Travelling Expenses (if any) £	:	:	13/3/96	

Committee's Minute **TUES. MAR 17 1896** **TUES. MAR 24 1896**

Assigned _____