

# REPORT ON MACHINERY.

No. 13390

THURS. 27 DEC 1894

Port of Glasgow  
 No. in Survey held at Glasgow Date, first Survey 21<sup>st</sup> August Last Survey 22<sup>nd</sup> December 1894  
 Reg. Book. S. S. "Ailsa" (Number of Visits 21)  
 on the S. S. "Ailsa" Gross 325  
 Master J. McCarty Built at Glasgow By whom built Ailsa S. B. Coy. Tons 44  
 Engines made at Glasgow By whom made Muir & Houston when made 1894  
 Boilers made at do. By whom made do. when made 1894  
 Registered Horse Power 47 Owners James Hamilton Port belonging to Glasgow  
 Nom. Horse Power as per Section 28 ✓

ENGINES, &c. — Description of Engines Compound Inverted No. of Cylinders 2  
 Diameter of Cylinders 16" x 34" Length of Stroke 24" Revolutions per minute as per rule  
 Diameter of Tunnel shaft as fitted 6 1/2" Diameter of Crank shaft journals 6 3/4" Diameter of Crank pin 6 3/4" Size of Crank webs 12 1/2" x 10" x 4 1/2"  
 Diameter of screw 8'-0" Pitch of screw 10'-0" No. of blades 4 State whether moveable No Total surface 20.5 sq. ft.  
 No. of Feed pumps 1 Diameter of ditto 2 1/4" Stroke 12" Can one be overhauled while the other is at work ✓  
 No. of Bilge pumps 1 Diameter of ditto 2 1/4" Stroke 12" Can one be overhauled while the other is at work ✓  
 No. of Donkey Engines 1 Sizes of Pumps 4 1/2" x 2 3/4" x 4" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Two 2 1/2" In Holds, &c. One 2 1/2" to forepeak, one 2 1/2" to after peak & two 2 1/2" to hold.  
 No. of bilge injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size yes 2 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 yes  
 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 Hold & forepeak suction 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 before yes  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock on stocks Is the screw shaft tunnel watertight none  
 Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c. — (Letter for record S.) Total Heating Surface of Boilers 95.0 sq. ft.  
 No. and Description of Boilers One Cylindrical return tube Working Pressure 125 lbs. Tested by hydraulic pressure to 250 lbs.  
 Date of test 13/1/94 Can each boiler be worked separately ✓ Area of fire grate in each boiler 35 1/2 sq. ft. No. and Description of safety valves to each boiler 2 Direct-spring Area of each valve 4.20" Pressure to which they are adjusted 125 lbs. Are they fitted with easing gear yes  
 Length 9'-6" Material of shell plates steel Thickness 3/32" Description of riveting: circum. seams lap d. riv. long. seams Butt. 3 riv.  
 Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 6" Top of plates on width of butt straps 1. 1 3/4"  
 Per centages of strength of longitudinal joint 81.2% Working pressure of shell by rules 127 lbs. Size of manhole in shell 12" x 16"  
 Size of compensating ring 2 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 2 Plain Material Steel Outside diameter 410"  
 Length of plain part top 6'-0" bottom 5'-0" Thickness of plates top 3/16" bottom 3/16" Description of longitudinal joint Weld No. of strengthening rings 2 none  
 Working pressure of furnace by the rules 127 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 3/4"  
 Pitch of stays to ditto: Sides 7 3/4" Back 7 3/4" Top 7' x 7" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 128 lbs.  
 Material of stays Steel Diameter at smallest part 96" Area supported by each stay 60" Working pressure by rules 128 lbs. End plates in steam space: Material Steel Thickness 3/32" Pitch of stays 14" x 15" How are stays secured d. nuts & washers Working pressure by rules 128 lbs. Material of stays Steel  
 Diameter at smallest part 3.4" Area supported by each stay 210" Working pressure by rules 150 lbs. Material of Front plates at bottom Steel  
 Thickness 1/16" Material of Lower back plate Steel Thickness 1/16" Greatest pitch of stays 14" Working pressure of plate by rules 14 lbs.  
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 1/16" Back 1/16" Mean pitch of stays 12"  
 Pitch across wide water spaces 14" x 12" Working pressures by rules 17 lbs. & 14 lbs. Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 6 1/2" x 3 1/4" Length as per rule 28" Distance apart 4" Number and pitch of Stays in each three 7"  
 Working pressure by rules 138 lbs. 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

GLS 171-0109



DONKEY BOILER—

Description

None

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  
Plates

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:—

According to rule requirements.

2 Connecting Rod bottom & top end bolts, 2 Main Bearing bolts, 1 set Coupling bolts, 1 set of feed & bilge pump valves, assorted bolts & nuts.

The foregoing is a correct description,

Muir & Houston Manufacturer.

General Remarks

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

The above Machinery

& Boiler is of good material & workmanship & have been well fitted on board the vessel, the engines have been tried under steam & worked well, & the Safety valves have been adjusted to a safe working pressure.

- 1 Boiler tracing attached
- 1 Forging Report "

It is submitted that  
this vessel is eligible for  
THE RECORD

LMC 12 94

ARR

27-12-94

MACHINERY  
WRITTEN

Certificate (if required) to be sent to

Glasgow

The amount of Entry Fee..

£

1 : "

When applied for,

Special

£

8 : "

26/12/94

Donkey Boiler Fee

£

4 : "

When received,

Travelling Expenses (if any) £

£

4 : "

26/12/94

Committee's Minute

Assigned

FRIDAY 23 DEC 1894

+ LMC 12, 94

Alex. Kidd

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Foundation