

REPORT ON MACHINERY.

No. 13390

THURS. 27 DEC 1894

Port of Glasgow

Received at London Office

No. in Survey held at Reg. Book.

Glasgow

Date, first Survey 21st August

Last Survey 22nd Decem^r 1894

(Number of Visits 21)

on the

S. S. "Ailsa"

Gross Tons 325
Net Tons 44

Master J. McCarty Built at Glasgow

By whom built Ailsa S. B. Coy.

When built 1894.12

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" & 34" Length of Stroke 24" Revolutions per minute as per rule Diameter of Screw shaft as fitted 6 3/4"

Diameter of Tunnel shaft as per rule 6.259" 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" to after peak & two 2 1/2" to hold. In Holds, &c. One 2 1/2" to fore peak, one 2 1/2"

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 & fore peak 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 950 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

Smallest distance between boilers or uptakes and bunkers or woodwork Open to ship's side Mean diameter of boilers 11.0"

Length 9'-6" Material of shell plates Steel Thickness 35/32" 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 rivets 107 7/8% Working pressure of shell by rules 127 lbs. Size of manhole in shell 12" x 16"

Size of compensating ring 2 1/2" rivets No. and Description of Furnaces in each boiler 2 Plain Material Steel Outside diameter 40"

Length of plain part top 6.0" Thickness of plates bottom 35/32" 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 1/2" 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 25/32" Pitch of stays 14" x 15" How are stays secured d. nuts & washers Working pressure by rules 128 lbs. Material of stays Steel

Area 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 174 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 174 lbs. 146 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 7" 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

If not, state whether, and when, one will be sent? Form No. 8-1-2 (Co. 100 ank)

Lloyd's Register Foundation

GLS 171-0109

13370 gles

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 casing gear _____ If steam from main boilers enter the donkey boiler _____

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

Description of ricting 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:— *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 1294
ARRR
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 £ " : " :
 Travelling Expenses (if any) £ : *4* : *26/12/94*

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

Committee's Minute *FRIDAY 23 DEC 1894*

Assigned *Lmc 12,94*



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