

REPORT ON MACHINERY.

Port of *Aberdeen*

Received at London Office **22 DEC 92**

No. in Survey held at *Aberdeen* Date, first Survey *October 4* Last Survey *December 20 1892*
Reg. Book. *90* on the *Wood & S. Barbaras* (Number of Visits *20*)

Master *not appointed* Built at *Anstruther* By whom built *W. Jarvis* Tons { Gross *93*
Net *57*
When built *1888*

Engines made at *Glasgow* By whom made *W. King & Co.* when made *1886* fitted *1888*

Boilers made at *Aberdeen* By whom made *Messrs. Hall, Russell & Co.* when made *1892*

Registered Horse Power *20* Owners *Mrs. W. R. Aiken* Port belonging to *Aberdeen*

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 <small>as per rule</small> <small>as fitted</small>	
Diameter of Tunnel shaft <small>as per rule</small> <small>as fitted</small>	Diameter of Crank shaft journals	Diameter of Crank pin	Size of Crank webs	
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		

If not, state whether, and Yes Report also sent on the Hull of the ship?

BOILERS, &c.—		(Letter for record <i>S</i>)	Total Heating Surface of Boilers <i>249.34 sq ft</i>
No. and Description of Boilers	<i>One cylindrical multitubular</i>	Working Pressure <i>100 lb</i>	Tested by hydraulic pressure to <i>200 lb</i>
Date of test	<i>27.10.92</i>	Can each boiler be worked separately <input checked="" type="checkbox"/>	Area of fire grate in each boiler <i>9.3 sq ft</i>
No. and Description of safety valves to each boiler	<i>Two direct spring</i>	Area of each valve <i>4.91 sq in</i>	Pressure to which they are adjusted <i>100 lb</i>
Are they fitted with easing gear	<i>Yes</i>	Smallest distance between boilers or uptakes and bunkers or woodwork	<i>8 in</i>
Mean diameter of boilers	<i>6.6</i>		
Length	<i>7.0</i>	Material of shell plates	<i>Steel</i>
Thickness	<i>1/2 in</i>	Description of riveting: circum. seams	<i>S. R. lap</i>
long. seams	<i>D. R. lap</i>		
Diameter of rivet holes in long. seams	<i>15/16</i>	Pitch of rivets	<i>3 1/2</i>
Lap of plates or width of butt straps	<i>4 3/4</i>		
Per centages of strength of longitudinal joint	<i>42</i>	Working pressure of shell by rules	<i>101 lb</i>
Size of manhole in shell	<i>11 x 15</i>		
Size of compensating ring	<i>1/2 in D. R.</i>	No. and Description of Furnaces in each boiler	<i>One plain</i>
Material	<i>Steel</i>		
Outside diameter	<i>33</i>		
Length of plain part	<i>4.9</i>	Thickness of plates	<i>1/2 in</i>
Description of longitudinal joint	<i>S. R. lap</i>		
No. of strengthening rings	<input checked="" type="checkbox"/>		
Working pressure of furnace by the rules	<i>142 lb</i>		
Combustion chamber plates: Material	<i>Steel</i>		
Thickness: Sides	<i>1/2 in</i>		
Back	<i>1/2 in</i>		
Top	<i>1/2 in</i>		
Bottom	<i>1/2 in</i>		
Pitch of stays to ditto: Sides	<i>7 1/2</i>		
Back	<i>8 x 8</i>		
Top	<i>radial</i>		
If stays are fitted with nuts or riveted heads	<i>nuts</i>		
Working pressure by rules	<i>120 lb</i>		
Material of stays	<i>Steel</i>		
Diameter at smallest part	<i>1 1/4 screw</i>		
Area supported by each stay	<i>64 sq in</i>		
Working pressure by rules	<i>22 lb</i>		
End plates in steam space: Material	<i>Steel</i>		
Thickness	<i>3/4 in</i>		
Pitch of stays	<i>15 in</i>		
How are stays secured	<i>all nuts</i>		
Working pressure by rules	<i>112 lb</i>		
Material of stays	<i>Steel</i>		
Diameter at smallest part	<i>2 screw</i>		
Area supported by each stay	<i>225 sq in</i>		
Working pressure by rules	<i>103 lb</i>		
Material of Front plates at bottom	<i>Steel</i>		
Thickness	<i>3/4 in</i>		
Material of Lower back plate	<i>Steel</i>		
Thickness	<i>3/4 in</i>		
Greatest pitch of stays	<i>8 x 8</i>		
Working pressure of plate by rules	<i>303 lb</i>		
Diameter of tubes	<i>3 1/2</i>		
Pitch of tubes	<i>4 1/2</i>		
Material of tube plates	<i>Steel</i>		
Thickness: Front	<i>3/4 in</i>		
Back	<i>5/8 in</i>		
Mean pitch of stays	<i>9 x 9</i>		
Pitch across wide water spaces	<input checked="" type="checkbox"/>		
Working pressures by rules	<i>248 lb</i>		
Girders to Chamber tops: Material	<input checked="" type="checkbox"/>		
Depth and thickness of girder at centre	<input checked="" type="checkbox"/>		
Length as per rule	<input checked="" type="checkbox"/>		
Distance apart	<input checked="" type="checkbox"/>		
Number and pitch of Stays in each	<input checked="" type="checkbox"/>		
Working pressure by rules	<input checked="" type="checkbox"/>		
Superheater or Steam chest; how connected to boiler	<i>S. R. flange</i>		
Can the superheater be shut off and the boiler worked separately	<input checked="" type="checkbox"/>		
Diameter	<i>2.0</i>		
Length	<i>2.0</i>		
Thickness of shell plates	<i>3/8 in</i>		
Material	<i>Steel</i>		
Description of longitudinal joint	<i>D. R. lap</i>		
Diam. of rivet holes	<i>1/16 in</i>		
Pitch of rivets	<i>2 1/4</i>		
Working pressure of shell by rules	<i>212 lb</i>		
Diameter of flue	<input checked="" type="checkbox"/>		
Material of flue plates	<input checked="" type="checkbox"/>		
Thickness	<input checked="" type="checkbox"/>		
If stiffened with rings	<input checked="" type="checkbox"/>		
Distance between rings	<input checked="" type="checkbox"/>		
Working pressure by rules	<i>70 lb</i>		
End plates: Thickness	<i>3/4 in</i>		
How stayed	<i>dished</i>		
Working pressure of end plates	<i>100 lb</i>		
Area of safety valves to superheater	<input checked="" type="checkbox"/>		
Are they fitted with easing gear	<input checked="" type="checkbox"/>		

L.R.P.H. Form No. 8. 4292. Copyable Ink.



4494 ABW

DONKEY BOILER— 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 _____

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,

Hall Russell & Co Manufacturers

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

The main boiler of this vessel has been constructed under Special Survey in accordance with the Rules and the approved tracing. The material and workmanship are good.

The vessel has been placed on the slipway of Messrs. J. Guthrie, Sons & Co. and the propeller, Sternbush, sea-cocks and fastenings examined. The tail shaft found considerably corroded a new end has been welded on the shaft.

In addition to the hold suction; a bilge suction to the engine room, and also a bilge injection has now been fitted.

The Engines opened up and the crank shaft found defective a new crank shaft has been fitted. The L.P. packing ring and spring found broken have been renewed.

The Engines and boiler of this vessel are now in good working condition and eligible in my opinion to receive the notification of L M C 12, 92 & N B 12, 92

It is submitted that this vessel is eligible for THE RECORD L.M.C. 12-92 & + NB 12-92

On acct. of wear & tear a new main boiler, and crank shaft were fitted, and a few repairs were effected to the machinery.

M.A.
22-12-92

Certificate (if required) to be sent to _____

The amount of Entry Fee..	£	:	:	When applied for,
Special	{ Hall Russell & Co 3	:	3	Dec. 20, 1892
	{ W. R. Aiken 3	:	3	£3.5 paid 24/12/92
Donkey Boiler Fee ..	£	:	:	When received,
Travelling Expenses (if any)	£	✓	:	3.5 22.92

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

Committee's Minute FRI 23 DEC 1892

TUES. 31 JAN 1893

Assigned

L M C 12, 92
+ N B 12, 92



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