

# REPORT ON MACHINERY.

110.

5120

Port of

Aberdeen

TUES. JAN 14 1896

Received at London Office

No. in Survey held at  
Reg. Book.

Aberdeen

Date, first Survey

Oct 2<sup>nd</sup> 1895

Last Survey

Jan 13<sup>th</sup>

1896

on the

steel screw steamer "Craigellachie"

(Number of Visits 2)

Master

W. Craig

Built at

Aberdeen

By whom built

Ball Russell & Co

Tons

Gross 111.85

Net 30.75

When built

1895-6

Engines made at

Aberdeen

By whom made

Ball Russell & Co

when made

1895-6

Boilers made at

Aberdeen

By whom made

Ball Russell & Co

when made

1895-6

Registered Horse Power

45

Owners

The Craigellachie Steam  
& Fishing Coy Ltd  
J. Brown & Co

Port belonging to

Aberdeen

Nom. Horse Power as per Section 28

42 HP

## ENGINES, &c.—

Description of Engines

Inverted Compound

No. of Cylinders

2

Diameter of Cylinders

13 1/2 x 30

Length of Stroke

21

Revolutions per minute

130

Diameter of Screw shaft

as per rule 5.63

Diameter of Tunnel shaft

as per rule

5.36

Diameter of Crank shaft journals

6 1/2

Diameter of Crank pin

6 1/2

Size of Crank webs

12 x 4 1/2

Diameter of screw

4-7

Pitch of screw

10-0

No. of blades

4

State whether moveable

No

Total surface

24.8 sq ft

No. of Feed pumps

one

Diameter of ditto

2 1/4

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

one

Diameter of ditto

2 1/4

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

one

Sizes of Pumps

Cyl 4 1/2 x 2 1/2

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

one 2" and one extra 2" to bilge

In Holds, &c.

Fore Hold one 2"

No. of bilge injections

one

size

3"

Connected to condenser or to circulating pump

Yes

Is a separate donkey suction fitted in Engine room & size

Yes 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

None

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

one to the fore hold

How are they protected

wooden 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

Yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

Dec 17-95

Is the screw shaft tunnel watertight

No tunnel

Is it fitted with a watertight door

Yes

worked from

Yes

## BOILERS, &c.—

(Letter for record S)

Total Heating Surface of Boilers

748.8 sq ft

No. and Description of Boilers

one ordinary type

Working Pressure

125

Tested by hydraulic pressure to

250

Date of test 18/12/95 Can each boiler be worked separately

Yes

Area of fire grate in each boiler

27 sq ft

No. and Description of safety valves to

each boiler

2 Spring

Area of each valve

5.939

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

9"

Mean diameter of boilers

10'-0"

Length

9'-0"

Material of shell plates

steel

Thickness

7/16"

Description of riveting: circum. seams

double

long. seams 3 rivets in a pitch

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

6 3/4"

Lap of plates or

width of butt straps

11 1/8"

Per centages of strength of longitudinal joint

plate

84.26

Working pressure of shell by rules

126

Size of manhole in shell

16 x 12"

Size of compensating ring

3/4 x 28"

No. and Description of Furnaces in each boiler

2 Plain

Material

steel

Outside diameter

Length of plain part

top 6' 16"

bottom 6' 16"

Thickness of plates

top 3/16"

bottom 3/16"

Description of longitudinal joint

double

No. of strengthening rings

Working pressure of furnace by the rules

138

Combustion chamber plates: Material

steel

Thickness: Sides

1/2"

Back

1/2"

Top

1/2"

Bottom

Pitch of stays to ditto: Sides

7 3/4"

Back

7 3/4"

Top

7 3/4"

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

128

Material of stays

steel

Diameter at smallest part

1 1/2"

Area supported by each stay

60.0

Working pressure by rules

134

End plates in steam space:

Material

steel

Thickness

13/16"

Pitch of stays

15"

How are stays secured

156 lbs

Working pressure by rules

128

Material of stays

Diameter at smallest part

3/4"

Area supported by each stay

225.0

Working pressure by rules

133

Material of Front plates at bottom

steel

Thickness

7/16"

Greatest pitch of stays

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2"

Material of tube plates

steel

Thickness: Front

13/16"

Back

3/4"

Mean pitch of stays

Pitch across wide water spaces

14"

Working pressures by rules

129

Girders to Chamber tops: Material

iron

Depth and

thickness of girder at centre

5 1/2 x 1 1/2"

Length as per rule

22 1/2"

Distance apart

7 1/2"

Number and pitch of Stays in each

Working pressure by rules

149.5

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

Yes



5120. *Alm.*

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 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:—

*As per Rules*

The foregoing is a correct description,

*Hall Russell & Co.* Manufacturers

General Remarks

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

*This vessel's machinery has been examined during construction and the materials & workmanship appear to be good & in accordance with the Rules requirements - on completion the Engines were seen running under steam with satisfactory results, the safety valves were then adjusted - She is therefore eligible in my opinion to be classed as regards machinery with notation of +LMC 1.96 in the Book Book -*

*attached will be found Boiler Drawing Pumping Plan & Shafting reports.*

*It is submitted that  
this vessel is eligible for  
THE RECORD.*

*L.M.C. 1.96.*

*Pres.  
14.1.96*

*ES  
14.1.96*

Certificate (if required) to be sent to

*This office*

The amount of Entry Fee.. £ 1 : 0 :  
Special .. .. £ 8 : 0 :  
Donkey Boiler Fee .. .. £ : :  
Travelling Expenses (if any) £ : :  
When applied for, Jan 13<sup>th</sup> 18.96  
When received, 15.1.18.96

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

Committee's Minute

FRI. JAN 17 1896

Assigned

*+LMC 1.96*

MACHINE CERTIFICATE  
WRITTEN.



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Foundation