

REPORT ON MACHINERY.

NO.

5120

Port of Aberdeen

TUES, JAN 14 1896

Received at London Office

No. in Survey held at Aberdeen
Reg. Book.

Date, first Survey Oct 2nd 1895 Last Survey Jan 13th 1896

on the steel screw steamer Craigellachie

(Number of Visits 2)

Master W. Craig Built at Aberdeen By whom built Hall Russell & Co Tons: Gross 111.85 Net 30.75 When built 1895-6

Engines made at Aberdeen By whom made Hall Russell & Co when made 1895-6

Boilers made at Aberdeen By whom made Hall Russell & Co when made 1895-6

Registered Horse Power 45 Owners The Craigellachie Steam Navigation Co Ltd 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 5.63 as per rule 5.36 as fitted 6 1/2

Diameter of Tunnel shaft 6 1/2 Diameter of Crank shaft journals 6 1/2 Diameter of Crank pin 6 1/2 Size of Crank webs 1 1/2 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

No. of Feed pumps one Diameter of ditto 2 1/4 Stroke 12 Can one be overhauled while the other is at work ✓

No. of Bilge pumps one Diameter of ditto 2 1/4 Stroke 12 Can one be overhauled while the other is at work ✓

No. of Donkey Engines one Sizes of Pumps 4 1/2 x 2 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps one 2" and one extra 2" to bilge

In Engine Room one 2" and one extra 2" to bilge In Holds, &c. Fore Hold one 2"

No. of bilge injections one sizes 3" Connected to condensers or to circulating pump Is a separate donkey suction fitted in Engine room & size two 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 ✓ worked from ✓

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 748.8

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 ✓ Area of fire grate in each boiler 27 No. and Description of safety valves to each boiler 2 Spring Area of each valve 5.939 Pressure to which they are adjusted 125 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 1/16" 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 84.25 Working pressure of shell by rules 126 Size of manhole in shell 16x12"

Size of compensating ring 2 1/2 x 28 No. and Description of Furnaces in each boiler 2 Plain Material steel Outside diameter 37 1/16"

Length of plain part 6.16 ft Thickness of plates 1/16" Description of longitudinal joint R. B. simple riveted No. of strengthening rings none

Working pressure of furnace by the rules 138 Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 3/32"

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 1.22" Area supported by each stay 677" Working pressure by rules 134 End plates in steam space: Material steel Thickness 13/16" Pitch of stays 15" How are stays secured 8 nuts & washers Working pressure by rules 139 Material of stays steel

Diameter at smallest part 3.34" Area supported by each stay 225" Working pressure by rules 133 Material of Front plates at bottom steel

Thickness 1/16" Material of Lower back plate 1/16" Thickness steel Greatest pitch of stays 10" Working pressure of plate by rules 163

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 10 1/8"

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 2 - 7 3/4"

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 ✓

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 ✓

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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 Blue Book -*

attached will be found Boiler Hoisting 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

This office

Certificate (if required) to be sent to _____

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

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

Committee's Minute

FRI. JAN 17 1896

Assigned

+LMC 1.96

MACHINERY CERTIFICATE WRITTEN.



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