

REPORT ON MACHINERY.

Port of Greenock

WFA. 29 April 1894
Received at London Office 18

No. in Survey held at Greenock & Campbeltown Date, first Survey Oct. 17. 1893 Last Survey 17th April 1894
Reg. Book. Supplement

(Number of Visits 77)

22 on the Screw Steamer "Guillemot."

Tons } Gross 1770.19
Net 1146.83

Master Harding Built at Campbeltown By whom built Campbeltown S.B. Coy. When built 1894

Engines made at Greenock By whom made Rankin & Blackmore when made 1894

Boilers made at do By whom made do when made 1894

Registered Horse Power 170 Owners General Steam Navigation Coy. Port belonging to London

Nom. Horse Power as per Section 28 165

ENGINES, &c.— Description of Engines Inverted Direct Acting Triple Expansion No. of Cylinders Three
 Diameter of Cylinders 20, 32 & 53 Length of Stroke 36 Revolutions per minute 74 Diameter of Screw shaft as per rule 9.57
 Diameter of Tunnel shaft as per rule 9.29 Diameter of Crank shaft journals 10 Diameter of Crank pins 10 Size of Crank webs 13 1/4 x 7 1/2
 Diameter of screw 13.3 Pitch of screw 14.0 No. of blades 4 State whether moveable no Total surface 60 square feet
 No. of Feed pumps Two Diameter of ditto 3 Stroke 22 Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two Diameter of ditto 4 Stroke 22 Can one be overhauled while the other is at work yes
 No. of Donkey Engines Two Sizes of Pumps 12 x 10 & 4 1/2 x 9 stroke No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room one 2 1/2 & two 2 1/2 In Holds, &c. three 2 1/2 & one in well of tunnel floor.

No. of bilge injections one sizes 5 3/8 Connected to condenser, or to circulating pump no 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 awash
 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 None How are they protected —
 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 on ship before launching Is the screw shaft tunnel watertight yes
 Is it fitted with a watertight door yes worked from engine room top platform.

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 2480 square feet.
 No. and Description of Boilers Two Round Horizontal Multitubular Working Pressure 165 lbs Tested by hydraulic pressure to 330 lbs.
 Date of test 8.3.94 Can each boiler be worked separately yes Area of fire grate in each boiler 44 sq ft No. and Description of safety valves to
 each boiler Two Area of each valve 4.91 sq in Pressure to which they are adjusted 170 lbs Are they fitted
 with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 11" Mean diameter of boilers 12.7"
 Length 10.0 Material of shell plates Steel Thickness 1 3/32 Description of riveting: circum. seams lap double long. seams 2 B. straps treble
 Diameter of rivet holes in long. seams 1 5/32 Pitch of rivets 8 1/4 & 4 1/8 Lap of plates or width of butt straps 1 1/2 straps
 Per centages of strength of longitudinal joint rivets 91 plate 86 Working pressure of shell by rules 165 lbs Size of manhole in shell 16 x 12
 Size of compensating ring 30 x 26 x 1 3/32 No. and Description of Furnaces in each boiler Two ribbed Material Steel Outside diameter 49 1/8
 Length of plain part top 2 1/2 bottom 2 1/2 Thickness of plates crown 7/16 bottom 9/16 Description of longitudinal joint welded No. of strengthening rings 1 on bottom
 Working pressure of furnace by the rules 165 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16 Back 9/16 Top 1/2 Bottom 1/2
 Pitch of stays to ditto: Sides 7 3/4 x 7 5/8 Back 7 3/4 x 7 5/8 Top 8 1/2 x 7 3/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 168 lbs
 Material of stays Steel Diameter at smallest part 1 1/4 & 1 3/8 Area supported by each stay 65 1/2 x 59 1/2 x 79 Working pressure by rules 165 lbs End plates in steam space:
 Material Steel Thickness 15/16 Pitch of stays 16 3/4 x 16 3/4 How are stays secured Double nuts Working pressure by rules 176 lbs Material of stays Steel
 Diameter at smallest part 2 7/16 Area supported by each stay 280 sq in Working pressure by rules 167 lbs Material of Front plates at bottom Steel
 Thickness 13/16 Material of Lower back plate Steel Thickness 7/16 & 1/2 Greatest pitch of stays 13 Working pressure of plate by rules 204 lbs
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/16 x 4 3/8 Material of tube plates Steel Thickness: Front 3/8 & 3/4 Back 3/4 Mean pitch of stays 11"
 Pitch across wide water spaces 14" Working pressures by rules 186 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8 3/8 x 3/4 length as per rule 32 Distance apart 8 1/2 Number and pitch of Stays in each Three 7 3/4
 Working pressure by rules 179 lbs Superheater or Steam chest; how connected to boiler — 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 casing gear —

DONKEY BOILER— Description *See Stockton Surveyor's Report*

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 _____ Descriptive 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:— *2 top & 2 bottom and bolts & nuts for connecting rods. 2 main bearing bolts. 1 set Coupling bolts. 2 bolts & 2 studs for eccentric straps. 2 valve rod bolts. 2 Eccentric rod top and bolts. 1 set of valves & seats for bilge & feed pumps. 1 set do for air pump. 1 set do for circulating pump. 12 tubes & 20 packing glands for condenser tubes.*

The foregoing is a correct description,
R. McKim & Blauwman Manufacturer.

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

*These Engines and Boilers have been specially surveyed during construction quality of workmanship good. Shafts examined when being turned and found apparently free from defects. Main steam pipes tested by hydraulic pressure to 330 lbs per sq. inch tests satisfactory. The Machinery and Boilers are satisfactory fitted on board and Engines tested under full steam they are now in good order and safe working condition and are in my opinion eligible to be noted in the Register Book. **LMC. 4. 94.***

Spare gear Continued.

8 tubes for Main Boilers. 1 set of escape valve springs for Cylinders. 1 Safety valve spring for Main Boilers. 1 Spring for feed pump relief valve. 10 junk ring pins 1/2 set fire bars for Main & Donkey Boilers. a quantity of bolts nuts & iron assort.

It is submitted that this vessel is eligible for THE RECORD **LMC 4, 94**
FRSE
25-4-94

MACHINERY CERTIFICATE WRITTEN.

Certificate (if required) to be sent to _____

The amount of Entry Fee.. £ 2 : - : When applied for,
 Special £ 24 : 15 : 18th April 1894
 Donkey Boiler Fee £ : : When received, 7th April
 Travelling Expenses (if any) £ 1 : 2 : 19th April 1894

A. B. Heron
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 Greenock District.

FRI 27 APR 1894

Committee's Minute
 Assigned

+ LMC 4, 94



The Surveyors are, and used to be, write on or below the space for Committee's Minute.