

REPORT ON MACHINERY.

No. 12884

Port of *Glasgow*

THURS. APR 1894

Received at London Office 18

No. in Survey held at *Glasgow* Date, first Survey *30th Oct. 1893* Last Survey *2nd April 1894*
 Reg. Book. on the *Steel S.S. Ship Shanes Castle* (Number of Visits *24*) Tons { Gross *184* Net *58*
 Master *G. Newton* Built at *Glasgow* By whom built *John Shanes & Sons* When built *1894*
 Engines made at *Glasgow* By whom made *Ross & Duncan* when made *1894*
 Boilers made at *Glasgow* By whom made *Ross & Duncan* when made *1894*
 Registered Horse Power Owners *Charles Legg* Port belonging to *Belfast*
 Nom. Horse Power as per Section 28

ENGINES, &c.— Description of Engines *Compound inverted.* No. of Cylinders *Two*
 Diameter of Cylinders *14" & 28"* Length of Stroke *20"* Revolutions per minute _____ Diameter of Screw shaft *as per rule 5.4" as fitted 5.2"*
 Diameter of Tunnel shaft *as per rule 5.4" as fitted 5.2"* Diameter of Crank shaft journals *5.2"* Diameter of Crank pin *5.2"* Size of Crank axles *3 3/4" x 10 1/4" x 7 5/8"*
 Diameter of screw *7.0"* Pitch of screw *9'-7 1/2"* No. of blades *4* State whether moveable *No* Total surface *18 sq. ft.*
 No. of Feed pumps *one* Diameter of ditto *2 1/2"* Stroke *11"* Can one be overhauled while the other is at work
 No. of Bilge pumps *one* Diameter of ditto *3"* Stroke *11"* Can one be overhauled while the other is at work
 No. of Donkey Engines *one* Sizes of Pumps *4" Cyl. 4" Piston 2" pump double acting* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *Bilge pump 2" Suction, Donkey pump 1 1/2" Suction* In Holds, &c. *All hold Suction 2"*
 No. of bilge injections *one* sizes *2 1/2"* Connected to condenser, or to circulating pump *pump* Is a separate donkey suction fitted in Engine room of size *yes 1 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
 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 *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 *before launching* 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 *675 1/2 sq. ft.*
 No. and Description of Boilers *one Multitubular Cylindrical* Working Pressure *110* Tested by hydraulic pressure to *220 lbs*
 Date of test *20/3/94* Can each boiler be worked separately Area of fire grate in each boiler *29 sq. ft.* No. and Description of safety valves to each boiler *two 2 1/2" G. Beckwith Patent* Area of each valve *4.9"* Pressure to which they are adjusted *110 lbs.* Are they fitted with casing gear *yes* Smallest distance between boilers or uptakes and bunkers *15"* *Outside* diameter of boilers *9'-6"*
 Length *9'-0"* Material of shell plates *Steel* Thickness *5/8"* Description of riveting: circum. seams *lap. D. riv.* long. seams *Butt. D. riv.*
 Diameter of rivet holes in long. seams *13/16"* Pitch of rivets *4 1/2"* ~~Top of plates or width of butt straps~~ *8 3/4"*
 Per centages of strength of longitudinal joint *108.8* Working pressure of shell by rules *115 lbs.* Size of manhole in shell *16" x 11 1/2"*
 Size of compensating ring *6' x 5 1/2"* No. and Description of Furnaces in each boiler *two plain* Material *Steel* Outside diameter *36"*
 Length of plain part *top 6'-3" bottom 5'-11"* Thickness of plates *5/8"* Description of longitudinal joint *welded* No. of strengthening rings *one 2 1/2" x 1 1/2"*
 Working pressure of furnace by the rules *113 lbs.* Combustion chamber plates: Material *Steel* Thickness: Sides *1/2"* Back *7/16"* Top *7/16"* Bottom *1/2"*
 Pitch of stays to ditto: Sides *7x7"* Back *7x7"* Top *7x7"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *157 x 110 lbs*
 Material of stays *Steel* Diameter at smallest part *8"* Area supported by each stay *49"* Working pressure by rules *130 lbs* End plates in steam space:
 Material *Steel* Thickness *3/8"* Pitch of stays *13 1/2" x 13 1/2"* How are stays secured *D. nuts* Working pressure by rules *111 lbs* Material of stays *Steel*
 Diameter at smallest part *2.31* Area supported by each stay *182 1/4"* Working pressure by rules *114 lbs* Material of Front plates at bottom *Steel*
 Thickness *5/8"* Material of Lower back plate *Steel* Thickness *5/8"* Greatest pitch of stays *13' x 10 1/2"* Working pressure of plate by rules *182 x 122*
 Diameter of tubes *3 1/4"* Pitch of tubes *4 1/4" x 4 1/4"* Material of tube plates *Steel* Thickness: Front *5/8"* Back *5/8"* Mean pitch of stays *10 5/8"*
 Pitch across wide water spaces *13' x 10 1/2"* Working pressures by rules *162 x 122* Girders to Chamber tops: Material *Iron* Depth and thickness of girder at centre *5" x 1 1/2"* Length as per rule *22 1/2"* Distance apart *4"* Number and pitch of Stays in each *21. 7"*
 Working pressure by rules *188 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 casing gear _____

Lloyd's Register Foundation

GLS169-0363

12887 Gls

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:— *One 4-bladed propeller, two connecting rod bolts; two piston rod bolts, two main bearing bolts, one set shaft coupling bolts one set of feed & bilge pump valves, six condenser tubes, six boiler tubes assorted bolts & nuts etc.*

The foregoing is a correct description,
Ross - Duncan Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The above mentioned engines & boiler have been constructed under special survey & are of good workmanship & material. they have been well fitted on board the vessel & on completion tried under steam with satisfactory results. The vessel is now in our opinion eligible to be noted in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD *LMC 4.94*
JRS
26-4-94

None

Certificate (if required) to be sent to *Glasgow*

The amount of Entry Fee.. £ *1* : " : } When applied for, *19/4 94*

J Special £ *8* : " : } *19/4 94*

Donkey Boiler Fee £ " : " : } When received, *21/4 94*

Travelling Expenses (if any) £ " : " : }

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

Committee's Minute *FRI 27 APL 1894*

Assigned *+ LMC 4.94*



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