

YACHT. REPORT ON MACHINERY.

6605
No. 21805

Port of Glasgow.

Received at London Office

14th MAY 1904

Survey held at Govan (Glasgow) Date, first Survey 19th Dec 03 Last Survey 24th May 1904

on the Twin Screw Yacht, "Queen of Scots" (Number of plates 20)

Built at Govan By whom built Fairfield S.B. & Co. Ltd. When built 1904

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ed Horse Power 112 Owners Peter Coats. Port belonging to

se Power as per Section 28 180 Is Refrigerating Machinery fitted yes Is Electric Light fitted yes.

ES, &c.—Description of Engines Triple Expansion No. of Cylinders Six No. of Cranks 6

Cylinders 10. 16 & 26 Length of Stroke 18" Revs. per minute 190 Dia. of Screw shaft as per rule 5 3/8" Material of S.M. Steel

screw shaft fitted with a continuous liner the whole length of the stern tube yes. Is the after-end of the liner made water tight

propeller boss yes If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two

are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 28"

tunnel shaft as per rule 5 3/8" Dia. of Crank shaft journals as per rule 5 3/8" Dia. of Crank pin 5 5/8" Size of Crank webs 11 x 4 1/8" Dia. of thrust shaft under

5 5/8" Dia. of screw 6-7 1/2" Pitch of screw 8-0" No. of blades 4 State whether moveable no Total surface 16 sq' each

Feed pumps one to each Diameter of ditto 2 1/2" Stroke 10" Can one be overhauled while the other is at work yes.

Bilge pumps one to each Diameter of ditto 2 1/2" Stroke 10" Can one be overhauled while the other is at work yes.

Donkey Engines two Sizes of Pumps 7 x 4 1/2" & 8" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room three 2" & one 2 1/2" diameter In Holds, &c. two 2" forward of boiler space.

ge injections 2 sizes 3 1/4" Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size yes. 2"

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 ✓

connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both.

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 below

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

pipes are carried through the bunkers none How are they protected ✓

pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes

bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes.

the stern tubes propeller screw shaft and all connections examined in dry dock 24/5/04 Is the screw shaft tunnel watertight yes

and with a watertight door yes worked from Engine Room top platform.

RS, &c.— (Letter for record S) Total Heating Surface of Boilers 1871 sq' Is forced draft fitted yes.

Description of Boilers One, Single Ended. Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs

est 2/3/04 Can each boiler be worked separately ✓ Area of fire grate in each boiler 43 sq' No. and Description of safety valves to

two direct spring area of each valve 7.07 sq' Pressure to which they are adjusted 20.5 lbs Are they fitted with easing gear yes

distance between boilers or uptakes and bunkers or woodwork 17" Mean dia. of boilers 13-3" Length 14 3/4" Material of shell plates Steel

15/32 Range of tensile strength 27/32 Are they welded or flanged no Descrip. of riveting: cir. seams long. seams Double Butt 5 rivets

of rivet holes in long. seams 1 1/4" Pitch of rivets 9" Lap of plates or width of butt straps 16"

es of strength of longitudinal joint rivets 85.0 Working pressure of shell by rules 201 lbs Size of manhole in end 15" x 11"

compensating ring flanged No. and Description of Furnaces in each boiler two, Monitors Material Steel Outside diameter 51"

plain part top Thickness of plates crown 2 1/32 Description of longitudinal joint welded No. of strengthening rings none

pressure of furnace by the rules 200 Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 7/8"

stays to ditto: Sides 8 1/4" x 8" Back 8 1/4" x 8 1/4" Top 8" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 204

of stays Steel Diameter at smallest part 1 7/16" Area supported by each stay 66 sq' Working pressure by rules 213 End plates in steam space:

Steel Thickness 1 3/32 Pitch of stays 16 1/2" x 15 1/2" How are stays secured D. nuts Working pressure by rules 209 Material of stays Steel

at smallest part 5 27/32 Area supported by each stay 256 sq' Working pressure by rules 206 Material of Front plates at bottom Steel

3/4" Material of Lower back plate Steel Thickness 1 1/16" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 278

of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 10"

ross wide water spaces 1 1/4" Working pressures by rules 201 lbs Girders to Chamber tops: Material Iron Depth and

of girder at centre 8 1/2" x 1 1/2" Length as per rule 29" Distance apart 8" Number and pitch of Stays in each row, 8"

pressure by rules 200 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked

Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

DONKEY BOILER—

No. *One* Description *Blakes Improved Patent.*

Made at *Widlesborough* By whom made *Richardson Westgarth & Co* When made *1903* Where fixed *Recess in stokes*

Working pressure *100* tested by hydraulic pressure to *200* No. of Certificate *3121* Fire grate area *14 sq ft* Description of safety valves *Direct spur*

No. of safety valves *2* Area of each *3.770* Pressure to which they are adjusted *105 lbs* If fitted with easing gear *yes* If steam from main boilers enter the donkey boiler *no*

Dia. of donkey boiler *5'-6"* Length *10'-0"* Material of shell plates *Steel* Thickness *7/16"* Range of tensile strength *27/32* Descrip. of riveting long. seams *D. R. Lap*

Dia. of rivet holes *13/16"* Whether punched or drilled *drilled* Pitch of rivets *2 3/4"* Lap of plating *4 1/4"* Per centage of strength of joint *70.7* Thickness of shell crown plates *9/16"* Radius of do. *3'-9"* No. of Stays to do. *none*

Dia. of stays *1 1/2"* Diameter of furnace Top *2'-9"* Bottom *4'-4"* Length of furnace *3'-5 1/2"* Thickness of furnace plates *1/2"* Description of joint *S.R. Lap*

Thickness of furnace crown plates *5/8"* Stays by *Cylindrical* Working pressure of shell by rules *102*

Working pressure of furnace by rules *104 lbs* Diameter of tubes *2 1/4"* Thickness of front tube plates *15/16"* Pitch of tubes *3 7/8"*

Thickness of back tube plates *7/8"* Thickness of super tubes *3 7/8"*

SPARE GEAR. State the articles supplied: *4 bolts for top & 4 for bottom connecting rod ends 2 main bearing bolts, one set of coupling bolts, one set of valves to air, to circulating, to bilge & to feed pumps. 8 Ramsbottom rings for H.P. piston, bolts for eccentric straps & rods, springs for safety & feed valves, one set of valves & seats for duplex pumps. a few boiler & condenser tubes, a few bars of iron & nuts & bolts of various sizes etc.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1903 Oct 19, 29. Nov 29, 30. Dec 7, 23. During erection on board vessel - 18, 24. May 3, 11, 24. Total No. of visits 20

Is the approved plan of main boiler forwarded herewith *yes*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this yacht has been built under special survey, the materials and workmanship are of good quality, it has been seen fitted on board and a satisfactory full speed trial run. Speed 12 knots.*

The machinery of this yacht is now in my opinion eligible for record of 12 knots M.C. 5.04 (in red) in register book.

There is a small ice making machine (by J. & E. Hall) on board but has not been fitted under special survey.

Two boiler plans and one forging report now attached.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 5.04 F.D. ELECT LIGHT.

Bald
27. 5. 04

George Murdoch
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee. £ : When applied for, Special .. £ 27 : 25 MAY 1904 1904 Donkey Boiler Fee .. £ : When received, Travelling Expenses (if any) £ : 28/6/04

Committee's Minute Glasgow 25 MAY 1904

Assigned *L.M.C. 5.04*