

REPORT ON MACHINERY.

No. 22197

Port of *Glasgow*

Received at London Office

19

Survey held at *Glasgow & Irvine* Date, first Survey *3rd Nov 03* Last Survey *14th Oct 1904*
 (Number of Visits *40*)

Book. on the *S S Bay Fisher.*

Built at *Dublin* By whom built *Dublin Dockyard Co* When built *1904*

es made at *Irvine* By whom made *Renfrew Bros & Co* when made *1904*

s made at *Glasgow* By whom made *David Rowan & Co* when made *1904*

tered Horse Power Owners *Fisher & Sons* Port belonging to *Barrow*

Horse Power as per Section 28 *100* Is Refrigerating Machinery fitted *No.* Is Electric Light fitted *No.*

INES, &c.—Description of Engine *Compound Surface Condensing* No. of Cylinders *Two* (No. of Cranks *2*

of Cylinders *20 & 42* Length of Stroke *30* Revs. per minute *92* Dia. of Screw shaft *9.02* Material of *Iron*

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

in 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 *38 1/2"*

Int. as per rule *8.36* Dia. of Crank shaft journals *8.77* Dia. of Crank pin *9"* Size of Crank webs *16 1/2 x 5 1/2* Dia. of thrust shaft under

as fitted *9"* Dia. of screw *10-6* Pitch of screw *13-6* No. of blades *4* State whether moveable *Yes* Total surface *36 sq ft*

of Feed pumps *2* Diameter of ditto *2 1/2"* Stroke *15"* Can one be overhauled while the other is at work *Yes.*

of Bilge pumps *2* Diameter of ditto *3"* Stroke *15"* Can one be overhauled while the other is at work *Yes.*

of Donkey Engines *Three* Sizes of Pumps *(6x7x8)(6x4x6)(3x2x3)* No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *One 2" diameter.* In Holds, &c. *Two 2" diameter.*

of bilge injections *1* sizes *4"* Connected to condenser, or to circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *Yes 2 1/2"*

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 *✓*

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

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*

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.*

it pipes are carried through the bunkers *Ballast fore peak & bilge* How are they protected *Wood boxing.*

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

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

en were stern tube, propeller, screw shaft, and all connections examined in dry dock *Dublin Report No 2302 Aug Sept 1902.* Is the screw shaft tunnel watertight *None*

t fitted with a watertight door *✓* worked from *✓*

TERS, &c.— (Letter for record *5*) Total Heating Surface of Boilers *1747 sq ft* Is forced draft fitted *No.*

and Description of Boilers *One, Single Ended* Working Pressure *130 lb* Tested by hydraulic pressure to *260 lb*

of test *21/6/04* Can each boiler be worked separately *✓* Area of fire grate in each boiler *53 1/2 sq ft* No. and Description of safety valves to

boiler *Two, direct spring* Area of each valve *7.06 sq in* Pressure to which they are adjusted *135 lb* Are they fitted with easing gear *Yes.*

least distance between boilers or uptakes and bunkers or woodwork *6-0"* Internal dia. of boilers *14-0"* Length *10-0"* Material of shell plate *Steel*

thickness *7/8"* Range of tensile strength *28/32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *DR Lap* long. seams *5 rivets*

meter of rivet holes in long. seams *1 1/16"* Pitch of rivets *6 3/4"* Lap of plates or width of butt straps *15 1/2"*

percentages of strength of longitudinal joint *111-0* Working pressure of shell by rules *130 lb* Size of manhole in *end 16" x 12"*

of compensating ring *Flanged* No. and Description of Furnaces in each boiler *3, plain* Material *Steel* Outside diameter *40 1/4"*

gth of plain part *7.2* Thickness of plates *5/8"* Description of longitudinal joint *Welded* No. of strengthening rings *None*

working pressure of furnace by the rules *134* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *7/8"*

h of stays to ditto: Sides *7/2 x 8/2* Back *9 x 9* Top *7/2 x 9* If stays are fitted with nuts or riveted heads *Nuts.* Working pressure by rules *135*

Material of stays *Steel* Diameter at smallest part *1.480* Area supported by each stay *81 sq in* Working pressure by rules *148* End plates in steam space:

Material *Steel* Thickness *1 1/16"* Pitch of stays *20 x 18 3/4"* How are stays secured *Nuts* Working pressure by rules *135* Material of stays *Steel*

Material at smallest part *5.340* Area supported by each stay *375 sq in* Working pressure by rules *142* Material of Front plates at bottom *Steel*

thickness *7/8"* Material of Lower back plate *Steel* Thickness *3/4"* Greatest pitch of stays *14 1/4"* Working pressure of plate by rules *136*

meter of tubes *3 1/4"* Pitch of tubes *4 1/2 x 4 3/8"* Material of tube plates *Steel* Thickness: Front *7/8"* Back *4/16"* Mean pitch of stays *11"*

h across wide water spaces *14 1/4"* Working pressures by rules *135 lb* Girders to Chamber tops: Material *Steel* Depth and

ness of girder at centre *7 1/2 x 13/8"* Length as per rule *30 1/2"* Distance apart *9"* Number and pitch of Stays in each *Three, 7 1/2"*

working pressure by rules *150 lb* 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

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

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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Lloyd's Register

W338-010 Foundation

DONKEY BOILER— No. *One* Description *Cochran's Patent.*
 Made at *Amman* By whom made *Cochran & Co.* When made *1904* Where fixed *Stokehold*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *6579* Fire grate area *9 3/4 sq ft* Description of safety valves *Direct spring*
 No. of safety valves *one* Area of each *4.90* Pressure to which they are adjusted *85 lbs* If fitted with easing gear *yes*. If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *4'-6"* Length *10'-0"* Material of shell plates *Steel* Thickness *1 3/32"* Range of tensile strength *27/32* Descrip. of riveting long. seams *Double* Dia. of rivet holes *25/32"* Whether punched or drilled *Drilled* Pitch of rivets *2 1/2"*
 Lap of plating *3 7/8"* Per centage of strength of joint *80-3* Rivets *80-3* Thickness of shell crown plates *3/8"* Radius of do. *2'-3"* No. of Stays to do. *None*
 Dia. of stays. *✓* *Radius* Diameter of furnace Top *1'-10 1/2"* Bottom *✓* Length of furnace *✓* Thickness of furnace plates *7/16"* Description of joint *Riveted* Thickness of furnace crown plates *7/16"* Stayed by *Not stayed* Working pressure of shell by rules *111 lbs*
 Working pressure of furnace by rules *116 lbs* Diameter of *tubes* *2 1/2"* Thickness of uptake plates *1/2" & 9/32"* Thickness of *stay* tubes *1/4"*

SPARE GEAR. State the articles supplied: *Two top and two bottom end bolts & nuts, two main bearing bolts and nuts, one set of coupling bolts & nuts, one set of feed and bilge pump valves, assorted bolts & nuts & a few bars of iron, two propeller blades, 3 boiler tubes, fire bars for main & donkey boiler, condenser tubes, fanules etc.*
 The foregoing is a correct description,
Reufred Brod & Co. Manufacturer.

Dates { During progress of work in shops - 1903 Nov 3, 6, 12, 18, Dec 3, 12, 16, 23, 26, 1904 Jan 11, 14, 19, 27, Feb 18, 24, Mar 4, 11, Apr 1, 25, 26
 of Survey { During erection on board vessel - May 6, 16, 26, 30, June 10, 23, 27, July 4, 13, 23, Aug 2, 4, 22, Sep 6, 16, 20, 27, Oct 3, 6, 14.
 while building { Total No. of visits 40.
 Is the approved plan of main boiler forwarded herewith *yes*
 " " donkey " " *no*.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been built under special survey, the materials and workmanship are of good quality, it has been securely fitted on board and satisfactorily tried under steam.*

In our opinion the machinery of this vessel is now eligible for record of L.M.C 10.04 (in red) in register book.

Boiler plan and two forging reports now sent.

It is submitted that this vessel is eligible for THE RECORD L.M.C 10 04

Wm. S. 21.10.04
21.10.04

The amount of Entry Fee... £ 2 : : : When applied for,
 Special £ 15 : : :
 Donkey Boiler Fee £ : : : When received,
 Travelling Expenses (if any) £ 4 : 17.9
 Committee's Minute
 Assigned
 FRI. 21 OCT 1904
 L.M.C 10.04
 George Hurdock & J.W. Dimmock
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 HARDY SMITH
 MACHINERY CERTIFICATE WRITTEN.

