

REPORT ON MACHINERY.

Fitted in this vessel when on the Stocks
Port of Dublin

11th DEC 1905

Received at London Office

No. in Survey held at
Reg. Book. 1
on the S.S. Shellie — yard number 52.Date, first Survey 16th Oct Last Survey Nov 1st 1905(Number of Visits 5)Tons
Gross
NetMaster Dublin Built at Dublin By whom built Dublin Dockyard & Co When built 1905Engines made at Glasgow By whom made Ross & Duncan when made 1905Boilers made at — By whom made — when made 1905Registered Horse Power 81 Owners Samuel Lockington & Co Port belonging to Dundack.Nom. Horse Power as per Section 28 81 Is Refrigerating Machinery fitted No Is Electric Light fitted —

ENGINES, &c.—Description of Engines

Compound S.C.No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 18.38 Length of Stroke 27 Revs. per minute 40 Dia. of Screw shaft 8.4 as per rule 8.5 as fitted Lgth. of stern bush 34 1/2
 Dia. of Tunnel shaft 7.4 as per rule 7.8 as fitted Dia. of Crank shaft journals 7.8 as per rule 7.8 as fitted Dia. of Crank pin 7.8 Size of Crank webs 5 1/4 x 1 1/2 Dia. of thrust shaft under collars 7 7/8 Dia. of screw 9.6 Pitch of screw 12.0 No. of blades 4 State whether moveable no Total surface 33 sq. feet
 No. of Feed pumps 2.5 Diameter of ditto 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2.5 Diameter of ditto 3 Stroke 13 1/2 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 1 Sizes of Pumps 6 x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 1-2" + 1-2 1/4" In Holds, &c. 2-2"

No. of bilge injections 1 sizes 3 1/4 Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes 2 1/4
 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 2-2" to hold, 1-2" to 3 FT How are they protected strong wood casings
 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 the dock yes Is the screw shaft tunnel watertight no tunnel
 Is it fitted with a watertight door — worked from —

BOILERS, &c.—

(Letter for record 5)Total Heating Surface of Boilers 1474.56 Is forced draft fitted no

No. and Description of Boilers One Multi-tubular Working Pressure 125 lb Tested by hydraulic pressure to 250 lb
 Date of test 25/8/05 Can each boiler be worked separately — Area of fire grate in each boiler 40 sq No. and Description of safety valves to each boiler 2 Spring Area of each valve 2.83 Pressure to which they are adjusted 130 lb Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 25" Mean dia. of boilers 12.9 Length 10.6 Material of shell plates S
 Thickness 25/32 Range of tensile strength 28/32 Are they welded or flanged no Descrip. of riveting: cir. seams DR long. seams TR. DR. S
 Diameter of rivet holes in long. seams 15/16 Pitch of rivets 5 7/8 Lap of plates or width of butt straps 15"
 Per centages of strength of longitudinal joint 89.4 Working pressure of shell by rules 125.5 Size of manhole in shell 12 x 7 1/2
 Size of compensating ring 6 1/4 x 25/32 No. and Description of Furnaces in each boiler 2 Plain Material S Outside diameter 47"
 Length of plain part 7.5 Thickness of plates 21/32 Description of longitudinal joint Welded No. of strengthening rings 1 bottom
 Working pressure of furnace by the rules 132 Combustion chamber plates: Material S Thickness: Sides 9/16 Back 17/32 Top 9/16 Bottom 9/16
 Pitch of stays to ditto: Sides 9 1/2 x 8 1/4 Back 8 1/4 x 8 1/4 Top 9 x 8 1/2 If stays are fitted with nuts or riveted heads yes Working pressure by rules 127
 Material of stays S Diameter at smallest part 1.25 Area supported by each stay 68 sq Working pressure by rules 144 End plates in steam space:
 Material S Thickness 29/32 Pitch of stays 17 x 17 1/2 How are stays secured DR. N. W. Working pressure by rules 130 Material of stays S
 Diameter at smallest part 3.77 Area supported by each stay 297.5 sq Working pressure by rules 126 Material of Front plates at bottom S
 Thickness 11/16 Material of Lower back plate S Thickness 3/8 Greatest pitch of stays 13 1/2 Working pressure of plate by rules 145
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/4 x 4 1/2 Material of tube plates S Thickness: Front 11/16 Back 11/16 Mean pitch of stays 10.87
 Pitch across wide water spaces 14 1/2 Working pressures by rules 128 Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 6 1/2 x 2 Length as per rule 30.5 Distance apart 8 1/2 Number and pitch of Stays in each 21 9"
 Working pressure by rules 136 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 easing gear —

DONKEY BOILER—

No. Description

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

Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength

Descrip. of riveting long seams Dia. 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:— 2 piston rod bolts 2 connecting rod. & 2 main bearing bolts 1 set coupling bolts 1 set feed pump valves 1 set of big pump valves bolts & nuts mounted spares as per rules.

The foregoing is a correct description,

James Duncan Manufacturer.

Dates of Survey { During progress of work in shops - 1905. Mar. 16. 28. Apr. 8. May 8. 17. Jun. 8. 12. July 4. 27. Aug. 4. 8. 25. Oct. 26. During erection on board vessel - - - Total No. of visits

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

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

Material of screw shaft *Iron* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *No - two liners*

Is the after end of the liner made water tight in the 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 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *not lapped or protected*

The discharge valves & sea cocks of this vessel, are efficiently fitted & fastened. The stern post has been bored & the stern tube well fitted & fastened. The stern bush, Propeller shaft Propeller & thrust shafts are all in place & efficiently fitted & fastened.

The engines & boilers of this vessel have been constructed under special survey & the materials & workmanship are sound & good. The engines have been tried under steam & the safety valves of the main & donkey boilers adjusted to the working pressure.

The Machinery of this vessel is now in good order & safe working condition & eligible in my opinion to have the notation of +L.M.C. 12.05 (in red) in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11.05

The amount of Entry Fee. £ *Forward Glasgow Surveyors* When applied for, 1905

Special .. £ When received, 14/12/05

Donkey Boiler Fee .. £

Travelling Expenses (if any) £ 12: 3: 1905

Committee's Minute

Assigned

Glasgow 11 DEC 1905

+ L.M.C. 12.05.

(Subject to classification of hull) *Survey*

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

Thos. L. Houston

FRI. 15 DEC 1905

Lloyd's Register Foundation

Certificate (if required) to be sent to