

REPORT ON MACHINERY.

WED. MAR 12 1902

Port of *Belfast*
 Date, first Survey *12 Jan 1901* Last Survey *27 March 1902*
 Received at London Office
 No. in Survey held at *Belfast*
 Book. *Belfast*
 on the *Royal*
 Master *R. Taylor* Built at *Belfast* By whom built *Northman Clark & Co.*
 Lines made at *Belfast* By whom made *when made*
 Makers made at *Belfast* By whom made *when made*
 Registered Horse Power *662* Owners *Dunstrut & Co. Ltd.* Port belonging to *Greenock*
 Horse Power as per Section 28 *662* Is Refrigerating Machinery fitted *Yes* Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines *Two in Screw. Triple Expansion*
 of Cylinders *20-33 1/2-56* Length of Stroke *45* Revs. per minute *45* Dia. of Screw shaft as per rule *12 1/2* No. of Cranks *6*
 of Tunnel shaft as per rule *11 1/2* Dia. of Crank shaft journals as per rule *11 1/2* Dia. of Crank pin *1 1/2* Size of Crank web *22 1/2 x 8* Dia. of stern bush *54*
 of Feed pumps *2 each* Dia. of screw *14-9* Pitch of screw *18-0* No. of blades *3 each* State whether moveable *Yes* Total surface *58 sq ft each*
 of Bilge pumps *1 each* Diameter of ditto *3 1/2* Stroke *24* Can one be overhauled while the other is at work *Yes*
 of Donkey Engines *Two* Sizes of Pumps *8 x 10 1/2 x 24 double* Can one be overhauled while the other is at work *Yes*
 Engine Room *Four-3 1/2* No. and size of Suctions connected to both Bilge and Donkey pumps
 of bilge injections *2 sizes 6 1/2* Connected to condenser, or to circulating pump *Yes* Are the roses in Engine room always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *Yes*
 all the bilge suction pipes fitted with roses *Yes* 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 *Below*
 all connections with the sea direct on the skin of the ship *Yes* Are the blow off cocks fitted with a spigot and brass covering plate *Yes*
 they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *Yes* How are they protected *Wood casing*
 they each fitted with a discharge valve always accessible on the plating of the vessel *Yes* Are the discharge pipes above or below the deep water line *Below*
 at pipes are carried through the bunkers *Yes* How are they protected *Wood casing*
 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*
 when were stern tube, propeller, screw shaft, and all connections examined in dry dock *Yes* Is the screw shaft tunnel watertight *Yes*
 it fitted with a watertight door *Yes* worked from *Chateaux Road* Aux *1231* 10488

BOILERS, &c.—(Letter for record *Yes*) Total Heating Surface of Boilers *9254 sq ft* Is forced draft fitted *Yes*
 and Description of Boilers *4- Single Ended Cylindrical* Working Pressure *140 lbs* Tested by hydraulic pressure to *380 lbs*
 of test *3-12-0* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *54 sq ft* No. and Description of safety valves to *380 lbs*
 boiler *Two- Sweet Springs* of each valve *9 1/2 sq in* Pressure to which they are adjusted *190 lbs* Are they fitted with easing gear *Yes*
 smallest distance between boilers or uptakes and bunkers *18* Mean dia. of boilers *14-6* Length *11-6* Material of shell plates *Steel*
 thickness *1 1/2* Range of tensile strength *28-32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *Top & Bottom* Long. seams *Butt. Straps*
 diameter of rivet holes in long. seams *1 1/2* Pitch of rivets *9 1/2* Lap of plates or width of butt straps *20 1/2*
 percentages of strength of longitudinal joint *87 1/2* Working pressure of shell by rules *217 lbs* Size of manhole in shell *16 x 12*
 of compensating ring *McNails* No. and Description of Furnaces in each boiler *3- Reightons* Material *Steel* Outside diameter *46 1/2*
 length of plain part *10* Thickness of plates *3 1/2* Description of longitudinal joint *Weld* No. of strengthening rings *5*
 working pressure of furnace by the rules *210 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *3 1/2* Back *5* Top *3 1/2* Bottom *1*
 pitch of stays to ditto: Sides *8 x 7 1/2* Back *8 1/2 x 8* Top *8 x 7 1/2* If stays are fitted with nuts or riveted heads *Nuts used* Working pressure by rules *198 lbs*
 material of stays *Steel* Diameter at smallest part *1 1/2* Area supported by each stay *68 sq in* Working pressure by rules *210 lbs* Material of stays *Steel*
 material *Steel* Thickness *1 1/2* Pitch of stays *17 x 15 1/2* How are stays secured *Nuts & washers* Working pressure by rules *247 lbs* Material of stays *Steel*
 diameter at smallest part *2 1/2 x 3 1/2* Area supported by each stay *268 sq in* Working pressure by rules *207 lbs* Material of Front plates at bottom *Steel*
 thickness *1* Material of Lower back plate *Steel* Thickness *3* Greatest pitch of stays *13 1/2* Working pressure of plate by rules *354 lbs*
 diameter of tubes *2 1/2* Pitch of tubes *3 1/2 x 3 1/2* Material of tube plates *Steel* Thickness: Front *4 1/2* Back *1 1/2* Mean pitch of stays *7 1/2 x 7 1/2*
 pitch across wide water spaces *13 1/2* Working pressures by rules *292 lbs* Material of Chamber tops: Material *Steel* Depth and
 thickness of girder at centre *9 1/2 x (7 1/2 x 2)* Length as per rule *26 1/2* Distance apart *8* Number and pitch of Stays in each *3-4 1/2*
 working pressure by rules *237 lbs* Superheater or Steam chest; how connected to boiler *Can the superheater be shut off and the boiler worked*
 separately *Yes* 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 *How stayed*
 stiffened with rings *Distance between rings* Working pressure by rules *End plates: Thickness*
 working pressure of end plates *Area of safety valves to superheater* Are they fitted with easing gear *Yes*

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

The machinery of this vessel has been constructed under Special Survey, and is of good materials and workmanship. It has been thoroughly fastened on board, and on trial in Belfast Lough, under strain, it worked satisfactorily. In my opinion it is eligible to have record + L.M.C. 3-A. Forced Draft, Electric Light & Refrigerating Machinery in the Report Book. Reports on the Electric Light installation, and on the Refrigerating Machinery, will be forwarded later.

The machinery of this vessel is duplicate of that fitted in the sister vessel. S.S. "Rayton Grange".

It is submitted that
this vessel is eligible for
THE RECORD. ✱ LMC 3.02. FD Elec. light
Ref. Mchy.

The amount of Entry Fee...	£
Special	£
Donkey Boiler Fee	£
Travelling Expenses (if any)	£

When applied for,
4-8-1902

When received,
12/3/02

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

Committee's Minute

TUES. MAR 18 1902

FRI. 11 JUL 1962

FRI. 17 OCT 1962

TUES. 26 AUG 1902

TUES. 16 SEP 1902

MACHINERY CERTIFICATE
WRITTEN.

902 2020

Lloyd's Register
Foundation