

## REPORT ON MACHINERY.

No. 6833.

Port of Belfast Received at London Office 10th 30 AUG 1910  
Date, first Survey 9<sup>th</sup> Sept 1909 Last Survey 20<sup>th</sup> Aug 1910  
No. in Survey held at Belfast (Number of Visits 68)  
Reg. Book. J.B. Wakeha Gross 7911  
on the Belfast Net 5042  
Master Belfast Built at Belfast By whom built Harland & Wolff When built 1910  
Engines made at Belfast By whom made Harland & Wolff when made 1910  
Boilers made at Belfast By whom made Harland & Wolff when made 1910  
Registered Horse Power 854 Owners James Laidlaw & Co. Ltd. Port belonging to Southampton  
Nom. Horse Power as per Section 28 854 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Two Large Quadruple Expansion Cylinders No. of Cranks 8  
Dia. of Cylinders 22-3/4-46-65 Length of Stroke 40 Revs. per minute 82 Dia. of Screw shaft 14-1/2 Material of screw shaft Steel  
Is the 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  
in the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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 Yes If two  
liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 4'-6"  
Dia. of Tunnel shaft 12-3/4 as per rule 12-9 Dia. of Crank shaft journals 13-7/8 as per rule 13-7/8 Dia. of Crank pin 13-7/8 Size of Crank webs 26 x 9 Dia. of thrust shaft under  
collars 13-7/8 Dia. of screw 16-3/4 Pitch of Screw 18'-6" No. of Blades 3 State whether moveable Yes Total surface 66 sq ft.  
No. of Feed pumps 1 Diameter of ditto 4-1/2 Stroke 28 Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 1 Diameter of ditto 5 Stroke 28 Can one be overhauled while the other is at work Yes  
No. of Donkey Engines 2 No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 6-3 1/2 and 4-2 1/2 In Holds, &c. 12-3 1/2 and 4-2 1/2

No. of Bilge Injections 2 sizes 9 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes-3 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 Yes  
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 Both  
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 Five hold suction How are they protected 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  
Dates of examination of completion of fitting of Sea Connections 13/5/10 of Stern Tube 12/5/10 Screw shaft and Propeller 13/5/10  
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform & Main

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel W. D. Williams & Sons  
Total Heating Surface of Boilers 9836 sq ft Forced Draft fitted No No. and Description of Boilers 2 Double End. by W.D.W.  
Working Pressure 215 lbs Tested by hydraulic pressure to 431 lbs Date of test 6-5-10 No. of Certificate 433  
Can each boiler be worked separately Yes Area of fire grate in each boiler 143 1/2 sq ft No. and Description of Safety Valves to  
each boiler 5-Wire Spring Area of each valve 11.04 sq in Pressure to which they are adjusted 215 lbs Are they fitted with easing gear Yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 18 in Mean dia. of boilers 16'-8" Length 19'-6" Material of shell plates Steel  
Thickness 1 1/4 Range of tensile strength 29-33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. & P. Y.  
long. seams Butt Lap Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 10 Lap of plates or width of butt straps 23 1/2  
Per centages of strength of longitudinal joint 99.1 Working pressure of shell by rules 252 lbs Size of manhole in shell 16 x 12  
Size of compensating ring 20 in No. and Description of Furnaces in each boiler 8-Moroccan Material Steel Outside diameter 43 1/2  
Length of plain part 2 Thickness of plates 3/8 Description of longitudinal joint Weld No. of strengthening rings 8 from  
Working pressure of furnace by the rules 231 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/2 Back 3/2 Top 3/2 Bottom 13/16  
Pitch of stays to ditto: Sides 7 1/2 x 7 1/2 Back 7 1/2 x 7 1/2 Top 7 1/2 x 7 1/2 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 214 lbs  
Material of stay Steel Diameter at smallest part 1 1/2 Area supported by each stay 62 sq in Working pressure by rules 300 lbs End plates in steam space:  
Material Steel Thickness 1 1/2 Pitch of stays 19 x 14 1/2 How are stays secured Nuts & Washers Working pressure by rules 215 lbs Material of stays Steel  
Diameter at smallest part 2 1/2 Area supported by each stay 243 1/2 sq in Working pressure by rules 250 lbs Material of Front plates at bottom Steel  
Thickness 3/8 Material of Lower back plate Steel Thickness 3/8 Greatest pitch of stays 13 Working pressure of plate by rules 214 lbs  
Diameter of tubes 2 1/2 Pitch of tubes 4 x 4 Material of tube plates Steel Thickness: Front 3/8 Back 13/16 Mean pitch of stays 8 x 8  
Pitch across wide water spaces 14 Working pressures by rules 338 lbs with Graders to Chamber tops: Material Steel Depth and  
thickness of girder at centre 9 x (8 x 2) Length as per rule 52 3/8 Distance apart 9 x 7 Number and pitch of stays in each 6-7 1/2  
Working pressure by rules 249 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked  
separately Yes Diameter 14 Length 14 Thickness of shell plates 3/8 Material Steel Description of longitudinal joint Weld Diam. of rivet  
holes 1 1/4 Pitch of rivets 10 Working pressure of shell by rules 252 lbs Diameter of flue 14 Material of flue plates Steel Thickness 3/8  
If stiffened with rings Yes Distance between rings 14 Working pressure by rules 252 lbs End plates: Thickness 3/8 How stayed By stays  
Working pressure of end plates 249 lbs Area of safety valves to superheater Are they fitted with easing gear



Lloyd's Register  
Foundation