

Port of Belfast

Received at London Office 31.14 OCT 1905-10

No. in Survey held at Belfast Date, first Survey March 21 Last Survey Oct 10 1905
Reg. Book. S.S. Operator (Number of Visits 52)
on the S.S. Operator Tons Gross 3578 Net 2282
Master Built at Belfast By whom built Workman Clark & Co. Ltd. When built 1915
Engines made at Belfast By whom made Workman Clark & Co. Ltd. when made 1915
Boilers made at By whom made when made
Registered Horse Power Owners Chartered Steamship Coy. Ltd. Port belonging to Liverpool
Nom. Horse Power as per Section 28 305 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 21-35-58 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 12.95 Material of screw shaft as fitted 13.5
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 54
Dia. of Tunnel shaft as per rule 11.41 Dia. of Crank shaft journals as per rule 11.98 Dia. of Crank pin 12.25 Size of Crank webs 22x88 Dia. of thrust shaft under collars 13 Dia. of screw 16-0 Pitch of screw 16-6 No. of blades 4 State whether moveable Yes Total surface 75 sq ft.
No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 3 1/4 Stroke 24 Can one be overhauled while the other is at work Yes
No. of Donkey Engines 3 Sizes of Pumps Ballnet 8x10x9 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4-3 1/2 In Holds, &c. 6-8 1/2 + 1-3

No. of bilge injections 1 sizes 7 Connected to condenser, or to circulating pump Pump 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 None
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 Fire hold suction How are they protected Work pumps
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 dry dock Before launching screw shaft tunnel watertight Stated to be
Is it fitted with a watertight door Yes worked from Top platform Engine Room

BOILERS, &c.— (Letter for record 7) Total Heating Surface of Boilers 5421 sq ft. Is forced draft fitted No
No. and Description of Boilers 3 - Single End Cylindrical Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs
Date of test 5-9-05 Can each boiler be worked separately Yes Area of fire grate in each boiler 53 1/2 sq ft. and Description of safety valves to each boiler Two - Spirit Spring each valve 7.07 sq in Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 18 Mean dia. of boilers 14-0 Length 10-7 Material of shell plates Steel
Thickness 1/2 Range of tensile strength 28-32 Are they welded or flanged No Descrip. of riveting: cir. seams Lap Riv. long. seams Butts Double
Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 9 3/2 Lap of plates or width of butt straps 19 1/2
Per centages of strength of longitudinal joint rivets 89.0 Working pressure of shell by rules 215 lbs Size of manhole in shell 76 x 12
plate 85.4
Size of compensating ring No. and Description of Furnaces in each boiler 3 - Morrison Material Steel Outside diameter 43 1/2
Length of plain part top 8 bottom 8 Thickness of plates crown 3 7/8 Description of longitudinal joint Weld No. of strengthening rings 0
Working pressure of furnace by the rules 213 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/2 Back 5/8 Top 1/2 Bottom 3/8
Pitch of stays to ditto: Sides 8 1/2 x 7 1/2 Back 8 1/2 x 7 1/2 Top 8 x 7 1/2 If stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 184 lbs
Material of stays Iron Diameter at smallest part 1 1/2 1/2 2 1/2 Area supported by stay 63 1/2 Working pressure by rules 209 lbs and plates in steam space:
Material Steel Thickness 1/8 Pitch of stays 6 1/2 x 12 1/2 Are stays secured No Working pressure by rules 158 lbs Material of stays Steel
Diameter at smallest part 2 1/2 2 1/2 2 1/2 supported by stay 25 1/4 Working pressure by rules 211 lbs Material of Front plates at bottom Steel
Thickness 1 Material of Lower back plate Steel Thickness 3/2 Greatest pitch of stays 14 1/2 Working pressure of plate by rules 189 lbs
Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plate Steel Thickness: Front 1 Back 3/2 Mean pitch of stays 9 1/2 x 9
Pitch across wide water spaces 14 1/2 Working pressures by rules 188 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 1/2 x (3 x 2) Length as per rule 265 Distance apart 8 Number and pitch of Stays in each 2 - 7 1/2
Working pressure by rules 215 lbs 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

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

DONKEY BOILER - No. *110* 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: *Propeller shaft; propeller boss; 4 propeller blades; Eccentric's frame & strap; 2 top end & 2 bottom end washes; one side valve & spindle; set for two revs H.P. & 1.P.; 50 Condenser tubes & females; air pump head valve; 2 Safety valve & pump jet - and all plan to Lloyd's Rules Extra.*
 The foregoing is a correct description, FOR WORKMAN, CLARK & CO., LIMITED. Manufacturer. *W. A. Bell*

Dates of Survey while building
 During progress of work in shops - *Mar. 21, 24, 28 April 1, 5, 12, 18, 20, 24 May 1, 3, 8, 11, 15, 24, 29 June 1, 7, 19, 22, 26, 28 July 5 Aug. 1, 4, 9, 9.*
 During erection on board vessel - *11, 15, 16, 16, 17, 18, 18, 23, 25, 29, 29 Sep. 1, 5, 5, 7, 7, 11, 12, 14, 20, 22, 26 Oct. 3, 6, 10*
 Total No. of visits *52* Is the approved plan of main boiler forwarded herewith *JLB*
 " " " donkey " " " " " " " " " " " "

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been constructed under Special Survey, and in accordance with the Rules. It has worked satisfactorily under steam, on trial, in Belfast Lough, and the materials, and the workmanship, are of good description throughout. In my opinion, it is eligible for record + L.M.C. 10-05 and Electric Light.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10-05 ELEC. LIGHT.

rsd
14.10.05

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

The amount of Entry Fee. £ *3* : - :
 Special .. £ *35* : - :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : :
 When applied for, *11-10-05*
 When received, *23-10-05*

Committee's Minute *TUES. 17 OCT 1905*
 Assigned *+ L.M.C. 1005*
elec. light



Certificate (if required) to be sent to the office