

REPORT ON MACHINERY.

Port of *Belfast*

Received at London Office **TUES. SEP 25 1900**

No. in Survey held at *Belfast* Date, first Survey *26 Apr 1899* Last Survey *21 Apr 1900*
Book. (Number of Volls *12*)

on the *S. B. Lamoen's* Gross *4080*
Tons Net *2625*
Built at *Belfast* By whom built *Warkman Clark & Co* When built *1900*

Lines made at *Belfast* By whom made *Warkman Clark & Co* when made *1900*

Registered Horse Power Owners *Lampson & Holt* Port belonging to *Liverpool*

Horse Power as per Section 28 *534* Is Electric Light fitted *Yes*

Engines, &c.—Description of Engines *Triple Expansion* No. of Cylinders *Three* No. of Cranks *Three*
Diameter of Cylinders *26 1/2 - 44 - 74* Length of Stroke *54* Revolutions per minute *112* Diameter of Screw shaft as per rule *14 1/4*
Diameter of Tunnel shaft as per rule *13 3/8* Diameter of Crank shaft journals *14 1/2* Diameter of Crank pin *14 1/2* Size of Crank webs *26 x 10*
Diameter of screw *14 1/2* Pitch of screw *19 1/2* No. of blades *Four* State whether moveable *No* Total surface *89 sq ft.*
of Feed pumps *Two* Diameter of ditto *4 1/2* Stroke *27* Can one be overhauled while the other is at work *Yes*
of Bilge pumps *Two* Diameter of ditto *4 1/2* Stroke *27* Can one be overhauled while the other is at work *Yes*
of Donkey Engines *3* Sizes of Pumps *Ballast 4 x 9 x 8 1/2* No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room *Three - 3 1/2* *Water 4 x 3 1/2* In Holds, &c. *Seven 3 1/2, one 2 1/2*

of bilge injections *One* sizes *7* Connected to circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *Yes - 3 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 *None*

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 *Yes*

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*

all pipes are carried through the bunkers *Five hold suction* How are they protected *Wood casings*

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*

stern tube, propeller, screw shaft, and all connections examined in dry dock *Before launching* Is the screw shaft tunnel watertight *Yes*

fitted with a watertight door *Yes* worked from *Top platform Engine Room*

Boilers, &c.— (Letter for record *D*) Total Heating Surface of Boilers *7504 sq ft.* Is forced draft fitted *Yes - Hawden's*

and Description of Boilers *Two Double Ended Cylind?* Working Pressure *190 lbs* Tested by hydraulic pressure to *330 lbs*

of test *27 1/2 - 00* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *99 1/2 sq ft* No. and Description of safety valves to boiler *Three - Direct Spring* Area of each valve *11 1/4* Pressure to which they are adjusted *190 lbs* Are they fitted

with casing gear *Yes* Smallest distance between boilers *15* and bunkers or woodwork *15* Mean diameter of boilers *13 1/2*

Material of shell plates *Steel* Thickness *1 1/2* Description of riveting: circum. seams *Lap Double Riveted* Butts *Double*

of rivet holes in long. seams *1 1/2* Pitch of rivets *9 1/2* width of butt straps *20 1/2*

percentages of strength of longitudinal joint *88 1/4* Working pressure of shell by rules *218 lbs* Size of manhole in shell *16 x 12*

of compensating ring *M. Nails* No. and Description of Furnaces in each boiler *6 - Marquis's Material Steel* Outside diameter *42 1/2*

of plain part *3* Thickness of plates *3 1/2* Description of longitudinal joint *Weld* No. of strengthening rings *27*

Working pressure of furnace by the rules *195 lbs* combustion chamber plates: Material *Steel* Thickness: Sides *5* Back *5* Top *5* Bottom *5*

Form No. 10

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DONKEY BOILER— Description *Cylindrical Single Ended*
 Made at *Wolfe* By whom made *Northman Clark & Co. L.* When made *1900* Where fixed *Upper deck*
 Working pressure *90 lbs* tested by hydraulic pressure to *180 lbs* No. of Certificate *194* Fire grate area *44 sq ft* Description of safety valves *Direct*
 No. of safety valves *Two* Area of each *8.29* Pressure to which they are adjusted *90 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Diameter of donkey boiler *12'-0"* Length *10'-0"* Material of shell plates *Steel* Thickness *3/4"*
 Description of riveting long seams *Butt Double Rivet* Diameter of rivet holes *3/4"* Whether punched or drilled *Drilled* Pitch of rivets *4 1/2"*
 Lap of plating *9"* Per centage of strength of joint *84.5* Rivets *84.5* Thickness of shell plates *3/4"* Radius of do. *Pitch* of Stays to do. *17 1/2 x 16 1/2*
 Dia. of stays *2 1/4"* Diameter of furnace Top *4 5/8"* Bottom *5"* Length of furnace *6'-5"* Thickness of furnace plates *3/4"* Description of joint *Mild* Thickness of *Comb. Chamber* plates *3/4"* Stayed by *3' screwed stay 9 x 9 pitch* Working pressure of shell by rules *104*
 Working pressure of furnace by rules *102 lbs* Diameter of *tubes* *3"* Thickness of *uptake* plates *3/4" x 1/4"* Thickness of *water* tubes *4 1/2" x 4"*

SPARE GEAR. State the articles supplied:— *Propeller shaft complete; thrust shaft; cast solid propeller; air pump bucket; circulating pump bucket; air pump; circulating pump rod; slide valve spindle; set crank pin bushes; set of cut bushes; set rings for H.P. & I.P. pistons; set safety valve springs; screws; pumps; set spare valves for air, circulating & pumps, and all gear to any requirements and one length crank shaft.*
 The foregoing is a correct description,
M. H. Bell Manufacturer.

Dates of Survey while building
 During progress of work in shops— *1899, 26, 29, 30, 31, Oct. 4-16-17, 24, 27, Nov. 2, 6, 8, 10, 14, 16, 17, 20, 21, 28, Dec. 2-12, 13, 19*
 During erection on board vessel— *1900, Jan 9, 17, 22, 26, 29, Feb. 12, 15, 16, 23, Mar. 1, 13, 15, 22, 26, 29, Apr. 4, 12, 23, 27, May 1, 4, 9, 10, 23, 30, 7, 8, 15, 19, 26, 29, July 3, 10, 20, 24, 26, 27, 30, Aug 2, 3, 17, 20, Sept 4, 7, 8, 10, 12, 14, 19, 20, 21.*
 Total No. of visits *42*

General Remarks (State quality of workmanship, opinions as to class, &c.)
ENGINES—Length of stern bush *61"* Diameter of crank shaft journals *14.04"* as per rule *14.04"* as fitted *14.5"* Diameter of thrust shaft under collars *14.5"*
BOILERS—Range of tensile strength *28-32* Are they welded or flanged *No* **DONKEY BOILERS**—No. *1* Range of tensile strength *28-32*
 Is the approved plan of main boiler forwarded herewith *Yes* Is the approved plan of donkey boiler forwarded herewith *Yes*

The machinery of this vessel, which is a duplicate of that fitted in the S.S. "Galdron", has been fitted on board, and worked satisfactorily under steam. It has been constructed in accordance with our Rules and in my opinion it merits the approval of the Committee, for record + L.M.C. 9-00. Forced Draft, and Electric Light.

An electric light installation has been fitted by Messrs Paulson Pros., a Report on which will be forwarded later.
 A Forging Report on the Engine Shafting is appended.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.00. F.D. Dec 2

W. J. D.
 25.9.00.
 25.9.00.

The amount of Entry Fee... £ 3 : - :
 Special ... £ 46 : 14 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for. *21-9-1900*
 When received. *21-9-1900*

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

Committee's Minute **FRI. 28 SEP 1900**
 Assigned *25.9.00*



Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minutes.

MACHINERY CERTIFICATE WRITTEN