

REPORT ON MACHINERY.

Port of *Belfast* THUR. MAR 22 1900
Received at London Office 18

No. in Survey held at *Belfast* Date, first Survey *8 March 1899* Last Survey *21 March 1900*
Reg. Book. *B.S. "Mimiro"* (Number of Visits *60*) Tons { Gross *6224*
Net *4024*

on the Master *F. Newman* Built at *Belfast* By whom built *W. & A. Clark & Co. Ltd.* When built *1900*
Engines made at *Belfast* By whom made *W. & A. Clark & Co. Ltd.* when made *1900*
Boilers made at *Belfast* By whom made *W. & A. Clark & Co. Ltd.* when made *1900*
Registered Horse Power *570* Owners *Supermarine* Port belonging to *London*
Nom. Horse Power as per Section 28 *570* Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *Three* No. of Cranks *Three*
Diameter of Cylinders *24" - 46" - 78"* Length of Stroke *54"* Revolutions per minute *65* Diameter of Screw shaft *15 1/2"* as per rule *15 1/2"*
Diameter of Tunnel shaft *15 1/2"* as fitted *15 1/2"* Diameter of Crank shaft journals *15 1/2"* Diameter of Crank pin *15 1/2"* Size of Crank webs *29 1/2" x 10 1/2"*
Diameter of screw *19" - 9"* Pitch of screw *20" - 0"* No. of blades *Four* State whether moveable *Yes* Total surface *109 sq ft*
No. of Feed pumps *Two* Diameter of ditto *5"* Stroke *24"* Can one be overhauled while the other is at work *Yes*
No. of Bilge pumps *Two* Diameter of ditto *6"* Stroke *24"* Can one be overhauled while the other is at work *Yes*
No. of Donkey Engines *Three* Sizes of Pumps *5" x 5" x 8" Mumpsford, General Service
10" x 10" x 12" Westinghouse, Millers
8" x 10" x 21" Mumpsford, General Service* Suctions connected to both Bilge and Donkey pumps
In Engine Room *Three - 3 1/2"* In Holds, &c. *None @ 3 1/2" one at 2 1/2"*

No. of bilge injections *one* sizes *8 1/2"* Connected to condenser, or to circulating pump *Pumps* 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 fitted*
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 *Below*
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 *No. 3 Hold bilge 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*
When were stern tube, propeller, screw shaft, and all connections examined in dry dock *15 March 1900* the screw shaft tunnel watertight *Stated to be*
Is it fitted with a watertight door *Yes* worked from *Engine Room Top Platform*

BOILERS, &c.—(Letter for record *3*) Total Heating Surface of Boilers *7648 sq ft* Is forced draft fitted *Yes* *Hawthorn*
No. and Description of Boilers *Four - Single Ended Cylind.?* Working Pressure *200 lbs* Tested by hydraulic pressure to *400 lbs*
Date of test *20-12-1899* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *48 1/2 sq ft* No. and Description of safety valves to
each boiler *Two - Direct Spring* Area of each valve *8.29 sq"* Pressure to which they are adjusted *205 lbs* Are they fitted
with easing gear *Yes* Smallest distance between boilers *24"* and bunkers *24"* Mean diameter of boilers *13" - 9"*
Length *11' - 6"* Material of shell plates *Steel* Thickness *1 1/2"* Description of riveting: circum. seams *Lap Rivet. Seams* Butt. Seams *Butt. Seams*
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"*
Per centages of strength of longitudinal joint *90.5* Working pressure of shell by rules *221 lbs* Size of manhole in shell *16" x 12"*
Size of compensating ring *No. 1 No. 2* No. and Description of Furnaces in each boiler *3 - Morrisons* Material *Steel* Outside diameter *41 1/2"*
Length of plain part *5'* Thickness of plates *35"* Description of longitudinal joint *Weld* No. of strengthening rings *1*
Working pressure of furnace by the rules *201 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *5"* Back *5 1/2"* Top *5"* Bottom *1"*
Pitch of stays to ditto: Sides *8 1/2" x 8"* Back *8 1/2" x 8"* Top *8 1/2" x 1 1/2"* If stays are fitted with nuts or riveted heads *Nuts in stays* Working pressure by rules *205 lbs*
Material of stays *Steel* Diameter at smallest part *1 1/2" x 1 1/2"* Area supported by *each* stay *64 sq"* Working pressure by rules *211 lbs* End plates in steam space:
Material *Steel* Thickness *1 1/2"* Pitch of stays *5 1/2" x 15 1/2"* How are stays secured *Q. Nuts in stays* Working pressure by rules *266 lbs* Material of stays *Steel*
Diameter at smallest part *2 1/2"* Area supported by *each* stay *248 sq"* Working pressure by rules *224 lbs* Material of Front plates at bottom *Steel*
Thickness *1"* Material of Lower back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *13 1/2"* Working pressure of plate by rules *298 lbs*
Diameter of tubes *2 1/2"* Pitch of tubes *3 1/2" x 3 1/2"* Material of tube plates *Steel* Thickness: Front *1 1/2"* Back *1 1/2"* Mean pitch of stays *7 1/2"*
Pitch across wide water spaces *13 1/2"* Working pressures by rules *236 lbs with 1/2" doubler* Girders to Chamber tops: Material *Steel* Depth and
thickness of girder at centre *8 1/2" x (3/4" x 2)* Length as per rule *28 1/2"* Distance apart *7 1/2"* Number and pitch of Stays in each *Two - 8 1/2"*
Working pressure by rules *257 lbs* Superheater or Steam chest; how connected to boiler *✓* Can the superheater be shut off and the boiler worked
separately *✓* Diameter *10"* Length *10"* Thickness of shell plates *1 1/2"* Material *Steel* Description of longitudinal joint *Weld* Diam. of rivet
holes *1 1/2"* Pitch of rivets *9 1/2"* Working pressure of shell by rules *221 lbs* Diameter of flue *10"* Material of flue plates *Steel* Thickness *1 1/2"*
If stiffened with rings *Distance between rings* Working pressure by rules *221 lbs* End plates: Thickness *1 1/2"* How stayed *By stays*
Working pressure of end plates *221 lbs* Area of safety valves to superheater *221 lbs* Are they fitted with easing gear *Yes*

DONKEY BOILER— Description *None*

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 _____

Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____

Description of riveting long. seams _____ Diameter 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 _____

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 Port Steam Propeller Rods: set crank pin bushes: one propeller shaft: thrust shaft: short length transverse shaft: set piston rod bushes: set pump rods & bushes: air pump glands & studs: 2 slide valve spindles: sets packing rings & pumps for all pistons, set. and all p. to Lloyd's Requirements additional.*

The foregoing is a correct description,

For *W. H. Bell* Manufacturer.

Dates of Survey while building

During progress of work in shops: *1899. March 8. April 24. May 8, 12, 23, 27. June 3, 17, 26, 29. July 3, 20, 24. Aug 4, 7, 26, 31*

During erection on board vessel: *Sept 5, 26, 30. Oct 4, 16, 17, 24. Nov 2, 8, 10, 14, 21, 23, 28, 29. Dec 1, 5, 8, 18, 20. 1900. Jan 4, 9.*

Total No. of visits: *16, 17, 22, 24, 26, 29. Feb 9, 13, 14, 15, 16, 22, 23, 26, 28. March 3, 6, 8, 12, 19, 20*

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

ENGINES—Length of stern bush *64"* Diameter of crank shaft journals *as per rule 14 1/2"* Diameter of thrust shaft under collars *15 1/2"*

BOILERS—Range of tensile strength *28-32* Are they welded or flanged *No* **DONKEY BOILERS**—No. *✓* Range of tensile strength *✓*

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

The machinery of this vessel, which is duplicate of that fitted in the S.S. "Star of Australia", has been examined under Special Survey. The materials and workmanship are of good description. It has been securely fitted on board, and an trial worked satisfactorily. An electrical installation by Barlow, Moor & Co., London, has been fitted and will be reported upon shortly.

Refrigerating Machinery, fitted by Hall & Co., for cargo purposes, has also been supplied.

In my opinion, the machinery of this vessel is eligible to have notification of *+ L.M.C. 3-1900*, Electric Light & Forced Draft also Refrigerating Machinery.

The Porey Report on the shafting is appended.

It is submitted that this vessel is eligible for THE RECORD.

LMC 3.00 F.D. Elec. light. Ref. 11

22.3.00

22.3.00

The amount of Entry Fee. £ 3 : - :
Special .. £ 48 : 10 :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : :
22.3.00

When applied for,

20-3-1900

When received,

24/3/00

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

Committee's Minute

Assigned

23 MAR 1900

+ LMC 3.00

MACHINERY CERTIFICATE WRITTEN



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Lloyd's Register Foundation

The amount of Entry Fee
Special Survey Fee
Travelling expenses

£ 2-0-0
£ 10-0-0
£ 9-2-9

£ 21-2-9

I am, Sir
Your obedient servant
D. McAuslan.



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C.N.F.