

REPORT ON MACHINERY.

Port of Belfast Received at London Office SAT. 7 JAN 1899
 No. in Survey held at Belfast Date, first Survey June 1st Last Survey Sept 6th 1898
 Reg. Book. L.S.S. "Manhattan" (Number of Visits 6)
 on the "Manhattan" Tons ^{Gross} 1898 _{Net}
 Master Belfast Built at Belfast By whom built Harland & Wolff When built 1898
 Engines made at Liverpool By whom made Fawcett Roston & Co when made 1898
 Boilers made at " By whom made " when made "
 Registered Horse Power " Owners Not known Port belonging to "
 Nom. Horse Power as per Section 28 "

ENGINES, &c.— Description of Engines No. of Cylinders
 Diameter of Cylinders Length of Stroke Revolutions per minute Diameter of Screw shaft ^{as per rule} _{as fitted}
 Diameter of Tunnel shaft ^{as per rule} _{as fitted} Diameter of Crank shaft journals Diameter of Crank pin Size of Crank webs
 Diameter of screw Pitch of screw No. of blades State whether moveable Total surface
 No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
 No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
 No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps
 in Engine Room In Holds, &c.
 No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size
 Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
 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 Main circulation discharges below
 Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate Yes
 What pipes are carried through the bunkers How are they protected
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launching Is the screw shaft tunnel watertight
 Is it fitted with a watertight door worked from "

BOILERS, &c.— (Letter for record ") Total Heating Surface of Boilers
 No. and Description of Boilers Working Pressure Tested by hydraulic pressure to
 Date of test Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to
 each boiler Area of each valve Pressure to which they are adjusted Are they fitted
 with easing gear Smallest distance between boilers or uptakes and bunkers or woodwork Mean diameter of boilers
 Length Material of shell plates Thickness Description of riveting: circum. seams long. seams
 Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint ^{rivets} Working pressure of shell by rules Size of manhole in shell
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 Length of plain part ^{top} _{bottom} Thickness of plates ^{crown} _{bottom} Description of longitudinal joint No. of strengthening rings
 Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
 Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
 Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 thickness of girder at centre Length as per rule Distance apart Number and pitch of Stays in each
 Working pressure by rules 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

DONKEY BOILER— 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 _____ 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 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 :—

The foregoing is a correct description,

Manufacturer.

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

Dates of Survey while building

During progress of work in shops—
 During erection on board vessel—
 Total No. of visits

Examined steam tubes, propellers and sea-cocks fittings before launching. Propeller shafts in place, and the propellers securely fitted on same. The vessel will leave in a day or two, for Liverpool, to have the machinery, which is being constructed there, fitted on board. This Report is forwarded, for the information of the Liverpool Surveyors

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	:	:18.....
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:18.....

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

TUES. 10 JAN 1899

Committee's Minute

Assigned



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