

# REPORT ON MACHINERY.

Port of Belfast

MUR. 14 MAY 1903

Received at London Office

No. in Survey held at Belfast  
Reg. Book. S.P. Counsellor  
on the

Date, first Survey 1<sup>st</sup> Octr 1902 Last Survey 8<sup>th</sup> May 1903

(Number of Visits) 5

Gross 4957  
Tons Net 3176

Master Belfast Built at Belfast By whom built Warkman Clark & Co When built 1903

Engines made at Belfast By whom made " when made 1903

Boilers made at " By whom made " when made "

Registered Horse Power v. Owners Charente S.S. Coy Port belonging to Liverpool

Nom. Horse Power as per Section 28 470 Is Refrigerating Machinery fitted " Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion, Direct Acting No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 25"-41"-68" Length of Stroke 54" Revs. per minute 70 Dia. of Screw shaft as per rule 14.79" Lgth. of stern bush 6'-0"  
Dia. of Tunnel shaft as per rule 13.48" Dia. of Crank shaft journals as per rule 14.15" Dia. of Crank pin 14.5" Size of Crank webs 26" x 10" Dia. of thrust shaft under rollers 14.5" Dia. of screw 17'-6" Pitch of screw 19 p.p. No. of blades 4 State whether moceable Yes Total surface 90 sq ft.

No. of Feed pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4.5" Stroke 26.5" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 5 Sizes of Pumps 9 x 10 x 11, 8 x 8 x 8, 6 x 4 x 5, 6 x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps 11-32" and 1-3"

No. of bilge injections 1 sizes 8" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes-32"

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 Fore 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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launching the screw shaft tunnel watertight Stated to be

Is it fitted with a watertight door Yes worked from Engine Room top platform

OILERS, &c.— (Letter for record 50) Total Heating Surface of Boilers 8448 sq ft. (including auxiliary) Is forced draft fitted No

No. and Description of Boilers Two-Double End, Cylind Working Pressure 190 lbs Tested by hydraulic pressure to 380 lbs

Date of test 7-4-03 Can each boiler be worked separately Yes Area of fire grate in each boiler 115 sq ft. No. and Description of safety valves to each boiler Two-Double Spring Area of each valve 11.04 sq Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork about 14" Mean dia. of boilers 15'-0" Length 14'-0" Material of shell plates Steel

Thickness 1/32" Range of tensile strength 28-32 Are they welded or flanged No Descrip. of riveting: cir. seams Lap, Dr. Tubing seams Butt Sable

Diameter of rivet holes in long. seams 1/32" Pitch of rivets 9 3/4" Lap of plates or width of butt straps 2 1/4"

Per centages of strength of longitudinal joint rivets 88.1 plate 84.9 Working pressure of shell by rules 220 lbs Size of manhole in shell 16 x 12"

Size of compensating ring McNeil's No. and Description of Furnaces in each boiler 6-Morrison Material Steel Outside diameter 44 1/4"

Length of plain part top 5" bottom 5" Thickness of plates crown 1/32" bottom 1/32" Description of longitudinal joint Weld No. of strengthening rings v

Working pressure of furnace by the rules 215 lbs combustion chamber plates: Material Steel Thickness: Sides 1/32" Back v Top 1/32" Bottom 1"

Pitch of stays to ditto: Sides 8 1/4" x 7 1/4" Back v Top 8 1/2" x 7 1/4" stays are fitted with nuts or riveted heads Nuts Working pressure by rules 201 lbs

Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 61 5/8 sq Working pressure by rules 192 lbs End plates in steam space:

Material Steel Thickness 1/4" Pitch of stays 18 x 15" How are stays secured Welded Working pressure by rules 252 lbs Material of stays Steel

Diameter at smallest part 2 1/16" Area supported by each stay 285 sq Working pressure by rules 214 lbs Material of Front plates at bottom Steel

Thickness 1" Material of Lower back plate v Thickness v Greatest pitch of stays v Working pressure of plate by rules v

Diameter of tubes 3 1/4" Pitch of tubes 4 1/8" x 4 1/8" Material of tube plates Steel Thickness: Front 1/8" Back 1/8" Mean pitch of stays 9 1/4" x 9 1/4"

Pitch across wide water spaces 14 1/4" Working pressures by rules 222 lbs with 5/8" double Chamber tops: Material Steel Depth and thickness of girder at centre 12 1/2" x (3/4" x 2) Length as per rule 40 1/4" Distance apart 8 1/2" x 8 1/4" Number and pitch of Stays in each 4-1/4"

Working pressure by rules 228 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 "



