

# REPORT ON MACHINERY.

Port of Belfast

Received at London Office 18 JAN 1911

No. in Survey held at Belfast Date, first Survey 23<sup>rd</sup> Dec 1909 Last Survey 14<sup>th</sup> Jan 1911  
Reg. Book. S.S. Hermistocles (Number of Visits 89)

Master J. Douglas Built at Belfast By whom built Harland & Wolff When built 1911  
Engines made at Belfast By whom made \_\_\_\_\_ when made \_\_\_\_\_  
Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_

Registered Horse Power ✓ Owners W. Champagne & Co. L<sup>td</sup> Port belonging to Mersey  
Nom. Horse Power as per Section 28 1045 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Screw Duplex Expansion of Cylinders 8 No. of Cranks 8  
Dia. of Cylinders 23"-34"-48"-69" Length of Stroke 51" Revs. per minute 78 Dia. of Screw shaft 14 1/2" Material of S. Steel  
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 ✓ If two  
liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 60 1/2"

Dia. of Tunnel shaft 13.5" Dia. of Crank shaft journals 12.65" Dia. of Crank pin 14 1/2" Size of Crank web 26 1/2" x 10 1/2" Dia. of thrust shaft under  
collars 14 1/2" Dia. of screw 16"-6" Pitch of Screw 19"-0" No. of Blades 3 State whether moveable Yes Total surface 72 sq ft.

No. of Feed pumps 1 Diameter of ditto 5 1/4" Stroke 28" Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 1 Diameter of ditto 5" Stroke 28" Can one be overhauled while the other is at work Yes

No. of Donkey Engines See Sizing Sheet No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 4-3 1/2" & 3-2 1/2" In Holds, &c. 16-3 1/2" & 9-2 1/2"

No. of Bilge Injections 2 sizes 8" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 2-4"  
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 ✓

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 bunker None - All bilge suction How are they protected Steel w. 7 tunnel

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

Dates of examination of completion of fitting of Sea Connections 15-9-10 of Stern Tube 9-9-10 Screw shaft and Propeller 19-9-10  
Is 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 ✓) Manufacturers of Steel W. Calwell & Sons L<sup>td</sup>  
Total Heating Surface of Boilers 14400 sq ft Forced Draft fitted No No. and Description of Boilers 3 Double End Cylindrical  
Working Pressure 215 lbs Tested by hydraulic pressure to 430 lbs Date of test 1-7-10 No. of Certificate 435

Can each boiler be worked separately Yes Area of fire grate in each boiler 124 sq ft. No. and Description of Safety Valves to  
each boiler 3 - Direct Spring Area of each valve 9.62 sq in Pressure to which they are adjusted 215 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15'-6" Length 19'-0" Material of shell plates Steel  
Thickness 1 3/32" Range of tensile strength 29-33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seam lap & r.

long. seam butt Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 10" Length of plates or width of butt straps 23 1/2"  
Per centages of strength of longitudinal joint  
rivets 90.6 Working pressure of shell by rules 250 lbs Size of manhole in shell 16" x 12"  
plate 82.4

Size of compensating ring W. Hails No. and Description of Furnaces in each boiler 6 - Monocene Material Steel Outside diameter 49 1/2"  
Length of plain part 6" Thickness of plates 3 3/32" Description of longitudinal joint Weld No. of strengthening rings 47 on

Working pressure of furnace by the rules 240 lbs Combustion chamber plates: Material Steel Thickness: Sides 5" Back ✓ Top 5" Bottom 5 1/2" & 16"  
Pitch of stays to ditto: Sides 7 1/2" x 7 1/2" Back ✓ Top 7 1/2" x 8 1/2" If stays are fitted with nuts or riveted heads None inside Working pressure by rules 217 lbs

Material of stays Steel Diameter at smallest part 1 1/8" & 1 1/4" Area supported by each stay 50 sq in Working pressure by rules 224 lbs End plates in steam space:  
Material Steel Thickness 1 1/2" Pitch of stays 8" x 5 1/2" How are stays secured Nuts on outside Working pressure by rules 215 lbs Material of stays Steel

Diameter at smallest part 3 1/4" & 2 7/8" Area supported by each stay 279 sq in Working pressure by rules 263 lbs Material of Front plates at bottom Steel  
Thickness 1 1/4" Material of Lower back plate ✓ Thickness ✓ Greatest pitch of stays ✓ Working pressure of plate by rules ✓

Diameter of tubes 3" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plate Steel Thickness: Front 1 1/4" Back 1 1/6" Mean pitch of stay 8 1/2" x 8 1/2"  
Pitch across wide water spaces 14 1/2" Working pressures by rules 226 lbs Material of Chamber tops: Material W. H. B. & Co. Depth and  
thickness of girder at centre 9 1/2" x (3+2) Length as per rule 49 1/2" Distance apart 8 1/2" Number and pitch of stays in each 6-7 1/2"

Working pressure by rules to appear 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 \_\_\_\_\_

