

REPORT ON MACHINERY.

Port of *Belfast*

Received at London Office **MUN. FEB 24 1902**

No. in Survey held at *Belfast* Date, first Survey *1902* Last Survey *19*
 Name of vessel *S.S. Walmer Castle* (Number of Visits *1*)
 Built at *Belfast* By whom built *Harland & Wolff L^{rs}* When built *1902*
 By whom made *Harland & Wolff L^{rs}* when made *1902*
 Owners *Union Castle Mail S^{vs} Co L^{rs}* Port belonging to *London*
 Registered Horse Power *2040* Is Refrigerating Machinery fitted *No* Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines

No. of Cylinders	No. of Cranks
<i>2</i>	<i>2</i>
Dia. of Cylinder	Length of Stroke
<i>18"</i>	<i>24"</i>
Revs. per minute	Dia. of Screw shaft
<i>100</i>	<i>12"</i>
Dia. of Tunnel shaft	Dia. of Crank shaft journals
<i>12"</i>	<i>12"</i>
Dia. of Crank pin	Size of Crank webs
<i>12"</i>	<i>12"</i>
Dia. of thrust shaft under	
<i>12"</i>	

Blades: *2* Dia. of screw *12"* Pitch of screw *12"* No. of blades *2* State whether moveable *No* Total surface *12"*

Feed pumps: *2* Diameter of ditto *12"* Stroke *12"* Can one be overhauled while the other is at work *Yes*

Bilge pumps: *2* Diameter of ditto *12"* Stroke *12"* Can one be overhauled while the other is at work *Yes*

Donkey Engines: *2* Sizes of Pumps *12"* No. and size of Suctions connected to both Bilge and Donkey pumps *2"*

Engine Room: *In Holds, &c.*

Bilge injections: *2* sizes *12"* Connected to condenser, or to circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *12"*

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 *Yes*

Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *Yes*

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 *Yes*

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*

How are they protected *By covers*

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*

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

Is it fitted with a watertight door *Yes* worked from *Top*

BOILERS, &c.— (Letter for record *Yes*) Total Heating Surface of Boilers *108 sq ft* Is forced draft fitted *No*

No. and Description of Boilers *Two Double End (12-8" diam)* Working Pressure *216 lbs* Tested by hydraulic pressure to *432 lbs*

Date of test *9-7-01* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *108 sq ft* No. and Description of safety valves to each boiler *Two Twist Spring* Pressure to which they are adjusted *216 lbs* Are they fitted with easing gear *Yes*

Smallest distance between boilers or uptakes and bunkers *12"* Mean dia. of boilers *13-8"* Length *19-6"* Material of shell plates *Steel*

Thickness *1/2"* Range of tensile strength *28-32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *Lat. Riv. Double* seams *Butt Double*

Diameter of rivet holes in long. seams *1/2"* Pitch of rivets *10"* Top of plates or width of butt straps *22 1/2"*

Percentage of strength of longitudinal joint *87.7* Working pressure of shell by rules *248 lbs* Size of manhole in shell *16" x 12"*

Size of compensating ring *McNeil* No. and Description of Furnaces in each boiler *6-Morrison* Material *Steel* Outside diameter *43 1/2"*

Length of plain part *4"* Thickness of plates *5/8"* Description of longitudinal joint *Weld* No. of strengthening rings *37*

Working pressure of furnace by the rules *201 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *5/8"* Back *5/8"* Top *5/8"* Bottom *5/8"*

Pitch of stays to ditto: Sides *8 x 7 1/2"* Back *8 x 7 1/2"* If stays are fitted with nuts or riveted heads *Nuts inside* Working pressure by rules *217 lbs*

Material of stays *Steel* Diameter at smallest part *1 1/4"* Area supported by each stay *62 sq in* Working pressure by rules *190 lbs* End plates in steam space: Material *Steel* Thickness *1"* Pitch of stays *6 x 15 1/2"* How are stays secured *Nuts & Washers* Working pressure by rules *227 lbs* Material of stays *Steel*

Diameter at smallest part *2 1/4"* Area supported by each stay *248 sq in* Working pressure by rules *242 lbs* Material of Front plates at bottom *Steel*

Thickness *5/16"* Material of Lower back plate *Steel* Thickness *5/8"* Greatest pitch of stays *8 x 8"* Working pressure of plate by rules *384 lbs with double*

Diameter of tubes *2 1/4"* Pitch of tubes *4 x 4"* Material of tube plates *Steel* Thickness: Front *1/2"* Back *1/2"* Mean pitch of stays *8 x 8"*

Pitch across wide water spaces *10 1/2"* Working pressures by rules *384 lbs with double* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *6 1/2" x 8"* Length as per rule *44"* Distance apart *7 1/2"* Number and pitch of Stays in each *4-8"*

Working pressure by rules *282 lbs* Superheater or Steam chest; how connected to boiler *Yes* Can the superheater be shut off and the boiler worked *Yes*

Separately: Diameter *12"* Length *12"* Thickness of shell plates *1/2"* Material *Steel* Description of longitudinal joint *Weld* Diam. of rivet *1/2"*

Boles: Pitch of rivets *10"* Working pressure of shell by rules *248 lbs* Diameter of flue *12"* Material of flue plates *Steel* Thickness *1/2"*

Is it stiffened with rings *Yes* Distance between rings *12"* Working pressure by rules *248 lbs* End plates: Thickness *1/2"* How stayed *By stays*

Working pressure of end plates *248 lbs* Area of safety valves to superheater *108 sq ft* Are they fitted with easing gear *Yes*

