

# REPORT ON MACHINERY.

No. 3049

No. in Survey held at *Belfast*

Reg. Book.

Date, first Survey *6<sup>th</sup> Dec 83*

Received at London Office

MONDAY 8 SEPT 1884

Last Survey *16<sup>th</sup> Aug 1884*

(Number of Visits *15*)

Tons *2452.38*

on the *S.S. Lord Lansdowne*

Master *C. A. Baskill* Built at *Belfast*

By whom built *Harland & Wolff*

When built *1884*

Engines made at *Belfast*

By whom made *Harland & Wolff*

when made *1884*

Boilers made at

By whom made

when made *1884*

Registered Horse Power *350*

Owners *The Irish Ship Owners Co. Ld.*

Port belonging to *Belfast*

## ENGINES, &c.—

Description of Engines *Compound, Inverted Surface Condensing.*

Diameter of Cylinders *37.72*

Length of Stroke *45*

No. of Rev. per minute *60*

Point of Cut off, High Pressure *Variable* Low Pressure *Variable*

Diameter of Screw shaft *13*

Diam. of Tunnel shaft *12*

Diam. of Crank shaft journals *13*

Diam. of Crank pin *13*

size of Crank webs *18 x 10*

Diameter of screw *16-6*

Pitch of screw *19-0*

No. of blades *4*

state whether moveable *yes* total surface *74 sq ft.*

No. of Feed pumps *Two*

diameter of ditto *4*

Stroke *90*

Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *Two*

diameter of ditto *4*

Stroke *90*

Can one be overhauled while the other is at work *yes*

Where do they pump from *engine room, all holds, afterwell and tunnel well.*

No. of Donkey Engines *3*

Size of Pumps *Ballast 1 1/2 dia x 10 stroke*

*Hot Well 4 1/2 x 9*

Where do they pump from *Small pump from sea, Tanks*

Are all the bilge suction pipes fitted with roses *yes*

Are the roses always accessible *yes*

Are the sluices on Engine room bulkheads always accessible *yes*

No. of bilge injections *One*

and sizes *4 1/2 dia*

Are they connected to condenser, or to circulating pump *Circulating Pump.*

How are the pumps worked *by levers from piston rod crossheads of both engines.*

Are all connections with the sea direct on the skin of the ship *yes*

Are they Valves or Cocks *both Valves & Cocks.*

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 *above except in ballast tank.*

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 *Suction for compartments.*

How are they protected *Strong wood casing.*

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times *yes*

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection 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 *yes*

and fitted with a sluice door *yes*

worked from *both platforms.*

## BOILERS, &c.—

Number of Boilers *Three*

Description *Cylindrical Multi-tubular*

Whether Steel or Iron *Steel.*

Working Pressure *90 lb*

Tested by hydraulic pressure to *180 lb*

Date of test *26/7/84.*

Description of superheating apparatus or steam chest *none fitted*

Can each boiler be worked separately *yes*

Can the superheater be shut off and the boiler worked separately *yes*

No. of square feet of fire grate surface in each boiler *61.8*

Description of safety valves *Spring*

No. to each boiler *Two*

Area of each valve *15.9 sq in*

Are they fitted with easing gear *yes*

No. of safety valves to superheater *yes*

area of each valve *yes*

Are they fitted with easing gear *yes*

Smallest distance between boilers and bunkers or woodwork *12"*

Diameter of boilers *14-4*

Length of boilers *10-0*

Description of riveting of shell long. seams *D.H. Butt, D.H. Riv. circum. seams D.H. Riv.*

Thickness of shell plates *3/16*

Diameter of rivet holes *1 1/8*

whether punched or drilled *drilled* pitch of rivets *4.505*

Lap of plating *Thompson's 11/8 wide*

Percentage of strength of longitudinal joint *75.02*

working pressure of shell by rules *92.1 lb*

size of manholes in shell *16 x 12*

No. of compensating rings *27 x 24 x 9/16*

No. of Furnaces in each boiler *Three*

Side diameter *3-6*

length, top *6-0* bottom *9-0*

thickness of plates *1/2*

Description of joint *D.B. Shop, Riv.*

if rings are fitted *bottom plates fitted by 2 rings*

Least length between rings *yes*

working pressure of furnace by the rules *88.8 lb*

combustion chamber plating, thickness, sides *1/2*

back *1/2* top *1/2*

Thickness of stays to ditto, sides *9 1/8 x 7 1/2*

back *9 x 9*

top *9 1/8 x 7 1/2*

If stays are fitted with nuts or riveted heads *Nuts*

working pressure of plating by

rules *92 lb* Diameter of stays at smallest part *1 3/8*

working pressure of ditto by rules *97.5 lb*

end plates in steam space, thickness *3/4*

Thickness of stays to ditto *17 x 17*

how stays are secured *D.H. Riv. Riv. Washers 1 1/4 dia x 3/4 thick*

working pressure by rules *88 lb*

diameter of stays at

Smallest part *2 3/8*

working pressure by rules *112 lb*

Front plates at bottom, thickness *3/4*

Back plates, thickness *3/4*

Least pitch of stays *about 12*

working pressure by rules *140 lb*

Diameter of tubes *3 1/4*

pitch of tubes *4 1/2*

thickness of tube

Thickness of plates, front *1/16*

back *1/16*

how stayed *Stay tubes*

pitch of stays *13 1/2 x 9*

width of water spaces *1 1/2*

Diameter of Superheater or Steam chest *yes*

length *yes*

thickness of plates *yes*

Description of longitudinal joint *yes*

diam. of rivet holes *yes*

No. of rivets *yes*

working pressure of shell by rules *yes*

diameter of flue *yes*

thickness of plates *yes*

If stiffened with rings *yes*

Distance between rings *yes*

working pressure by rules *yes*

end plates of superheater, or steam chest; thickness *yes*

how stayed *yes*

Superheater or steam chest; how connected to boiler *yes*



**DONKEY BOILER**— Description *No Donkey Boiler fitted to this Vessel.*

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 \_\_\_\_\_ if fitted with easing gear \_\_\_\_\_ if steam from main boilers can enter the donkey boiler \_\_\_\_\_

diameter of donkey boiler \_\_\_\_\_ length \_\_\_\_\_ description of riveting \_\_\_\_\_

Thickness of shell plates \_\_\_\_\_ diameter of rivet holes \_\_\_\_\_ whether punched or drilled \_\_\_\_\_ pitch of rivets \_\_\_\_\_ lap of plating \_\_\_\_\_

per centage of strength of joint \_\_\_\_\_ thickness of crown plates \_\_\_\_\_ stayed by \_\_\_\_\_

Diameter of furnace, top \_\_\_\_\_ bottom \_\_\_\_\_ length of furnace \_\_\_\_\_ thickness of 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 plates \_\_\_\_\_ thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied: *In addition to the spare gear required by the rules the following articles have been supplied, 1 set Propeller blades, 1 Air pump rod, 2 spindles for high and low pressure and expansion slide valves, 2 Safety Valve springs, 6 junk ring bolts, spare studs for Cylinder Covers.*

The foregoing is a correct description, *F.P.M.*

*Harland & Wolff* Manufacturer.

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

*Material and workmanship good and satisfactory.*  
*The Machinery and Boilers of this Vessel are in good order and safe working condition and, in my opinion, eligible to have the notification "Lloyd's M.C." 9-84 recorded in the Register Book.*

*No submitted that this vessel is eligible to have the notification "Lloyd's M.C." 9-84 recorded 11/9/84*

The amount of Entry Fee ... £ *3* : : : received by me, *J.E.*

Special ... £ *37* : *10* : :

Donkey Boiler Fee ... £ : : :

Certificate (if required) *not* : : *5.9.* 18*84*

To be sent as per margin.

(Travelling Expenses, if any, £ *9-9-0*.)

Committee's Minute

TUESDAY 9 SEPT 1884

*Duncan Ritchie*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.