

# REPORT ON MACHINERY.

No. 3049

No. in Survey held at *Belfast*

Reg. Book.

Date, first Survey *6<sup>th</sup> Dec 1883* Last Survey *16<sup>th</sup> Aug 1884*

Received at London Office *MONDAY 8 SEPT 1884*

(Number of Visits *15*) Tons *2452.58*  
*1815.6*

on the *S.S. Lord Lansdowne*

Master *C. A. Parkhill* 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. L<sup>d</sup>* Port belonging to *Belfast*

## ENGINES, &c.—

Description of Engines *Compound, Inverted Surface Condensing.*

Diameter of Cylinders *37 x 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* Where do they pump from *Small pumps from sea, Tanks*

*hot well, Feed Tank, from all compartments, also from sea, hot well & tanks, Ballast Tank, from Tanks only.*

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 boiler room*

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*

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *top platform.*

## 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*

Area 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 ft* Are they fitted with casing gear *yes* No. of safety valves to superheater *yes* area of each valve *yes*

Are they fitted with casing 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 *1/8* whether punched or drilled *drilled* pitch of rivets *4.575* Lap of plating *Progs 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*

Number 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.H. Butt, Riv. circum.* if rings are fitted *bottom plates fitted by rivets*

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*

How stays are secured *D.H. Riv. Riv. Washers 1 1/2 dia x 3/4 thick* working pressure by rules *88 lb* diameter of stays at smallest part *2 5/8* 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 *3/4* pitch of tubes *4 1/2* thickness of tube plates, front *1/16* back *1/16* how stayed *Stay tubes*

Diameter of Superheater or Steam chest *yes* length *yes* thickness of plates *yes* description of longitudinal joint *yes* diam. of rivet holes *yes*

Number 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*



**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 certification *Hydr M C 9-84* recorded in the Register Book.*

*No submitted that this vessel is eligible to have the certification of M.C. recorded M 9/84*

*[Handwritten signature in blue ink]*

The amount of Entry Fee .. £ 3 : : received by me,  
 Special .. £ 37 : 10 :  
 Donkey Boiler Fee .. £ - : :  
 Certificate (if required) *20/-* : : 5.9. 1884  
 To be sent as per margin.  
 (Travelling Expenses, if any, £ 9-9-0)

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

Committee's Minute

TUESDAY 9 SEPT 1884

*[Handwritten signature]*



Lloyd's Register Foundation