

Auxiliary single ended Boiler
REPORT ON MACHINERY.

No. 4107

Port of *Belfast*

No. in Survey held at *Belfast*

Date, first Survey *Dec 10th 1891* Last Survey *May 28th 1892*

Received at London Office

1 JUN 1892

on the *Steel Twin Screw Steamer "Lord Erne"*

(Number of Visits *22*)

Gross *5609*
Tons Net *3647*
When built *1892*

Master *James Dunn* Built at *Belfast*

By whom built *Harland & Wolff Ltd*

Engines made at *Belfast*

By whom made *Harland & Wolff Ltd*

when made *1892-5*

Boilers made at *Belfast*

By whom made *Harland & Wolff Ltd*

when made *1892-5*

Registered Horse Power *418*

Owners *Irish Shipowners Co Ltd*

Port belonging to *Belfast*

Net Horse Power as per Section 28 *418*

Engines, &c.—

Description of Engines

meter of Cylinders
meter of Tunnel shaft as per rule
meter of screw
Pitch of screw
of Feed pumps
Diameter of ditto
Stroke
of Bilge pumps
Diameter of ditto
Stroke
of Donkey Engines
SIZES OF PUMPS
Engine Room
No. and size of Suctions connected to both Bilge and Donkey pumps
In Holds, &c.
of bilge injections sizes
Connected to condenser, or to circulating pump
Is a separate donkey suction fitted in Engine room & size
all the bilge suction pipes fitted with roses
Are the roses in Engine room always accessible
Are the sluices on Engine room bulkheads always accessible
all connections with the sea direct on the skin of the ship
Are they Valves or Cocks
they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates
Are the discharge pipes above or below the deep water line
they each fitted with a discharge valve always accessible on the plating of the vessel
Are the blow off cocks fitted with a spigot and brass covering plate
pipes are carried through the bunkers
How are they protected
all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times
the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges
were stern tube, propeller, screw shaft, and all connections examined in dry dock
Is the screw shaft tunnel watertight
fitted with a watertight door
worked from

Boilers, &c.—

(Letter for record *S*)

Total Heating Surface of Boilers

Description of Boiler *single ended boiler* Working Pressure *180* Tested by hydraulic pressure to *360*
test *18.2.92* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *32 3/8* No. and Description of safety valves to
Boiler *Two: Cockburn's* Area of each valve *3.98* Pressure to which they are adjusted *180* Are they fitted
sing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork
Material of shell plates *Steel* Thickness *1 3/32* Description of riveting: circum. seams *Centre-triple* long. seams *double butts*
of rivet holes in long. seams *1 1/4* Pitch of rivets *8" & 4"* Lap of plates or width of butt straps *1" 7/8 x 1/8 thick*
ages of strength of longitudinal joint rivets *89.6* Working pressure of shell by rules *181* Size of manhole in shell *16 x 12*
compensating ring *2' 7" x 2' 3" x 1 3/32* No. and Description of Furnaces in each boiler *2 ribbed* Material *steel* Outside diameter *3' 2"*
of plain part top *ribs* Thickness of plates crown *1/2* Description of longitudinal joint *welded* No. of strengthening rings *9 ribs*
pressure of furnace by the rules *195* Combustion chamber plates: Material *steel* Thickness: Sides *19/32* Back *19/32* Top *5/8* Bottom *13/16*
stays to ditto: Sides *7 3/4 x 7 3/4* Back *7 3/4 x 7 3/4* Top *8 1/8 x 7 3/4* If stays are fitted with nuts or riveted heads *nuttid inside* Working pressure by rules *203*
of stays *steel* Diameter at smallest part *1 3/8* Area supported by each stay *63* Working pressure by rules *188* End plates in steam space:
Steel Thickness *15/16* Pitch of stays *15 x 16* How are stays secured *double nuts* Working pressure by rules *193* Material of stays *steel*
at smallest part *2 3/4* Area supported by each stay *234* Working pressure by rules *188* Material of Front plates at bottom *steel*
13/16 Material of Lower back plate *Steel* Thickness *31/32* Greatest pitch of stays *as app^d* Working pressure of plate by rules *180*
of tubes *3 1/4* Pitch of tubes *4 1/2* Material of tube plates *steel* Thickness: Front *7/8* Back *3/4* Mean pitch of stays *9"*
cross wide water spaces *14 1/2* Working pressures by rules *180* Girders to Chamber tops: Material *W. I.* Depth and
of girder at centre *7" x 2"* Length as per rule *2' 4"* Distance apart *8 1/8* Number and pitch of Stays in each *3 pit^d 7 3/4*
pressure by rules *191* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler worked
Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
with rivets Distance between rings Working pressure by rules End plates: Thickness How stayed
plates Area of safety valves to superheater Are they fitted with easing gear

DONKEY BOILER— Description

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 _____ Pressure to which they are adjusted _____ If fitted with easing gear _____ If steam from main boilers can
 enter the donkey boiler _____ Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____
 Description of riveting long seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____
 Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____
 Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description _____
 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 uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Horland & Co. Ltd. Manufacturer.

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



Certificate (if required) to be sent to _____

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	:	:18.....
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:18.....

A. L. Jones

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

Committee's Minute

FRI 3 JUN 1892

Assigned



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Foundation