

DONKEY BOILER— Description *Cylindrical single ended Multitubular (see form attached)*
Made at *Belfast* by whom made *Victor Coates & Co* when made *1887* where fixed *on upper deck*
Working pressure *60 lbs.* tested by hydraulic pressure to *120 lbs.* No. of Certificate *22* 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 *no.* 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:— *2 propeller blades; 1 air pump rod, bucket & head
valve seat with valves; 1 circulating pump rod bucket & valves; 2 slide valve
spindles; 1 pair of crank pin brasses; 1 set of feed & bilge pump valves with reas
6 pump ring bolts; 1 set of coupling bolts; 2 main bearing bolts; 1 set of con. rod top &
The foregoing is a correct description, *bot. end bolts; 8 studs & nuts for propeller blades; an
Harland & Wolff Manufacturer. assorted quantity of bolts nuts & iron bars &c &c.**

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

*The boilers and other parts of the machinery have been constructed &
fitted in vessel in accordance with the plans approved of by the
Committee, the Secretary's letters dated 28th June, 1886; & 16th June, 1887,
in accordance with or equivalent to the Rules of the Society for
the Special Survey on New Machinery and to the satisfaction of
the undersigned.*

*The steel used in the construction of the Boilers has been tested as
required by the Rules.*

*The Boilers when tested under hydraulic and machinery ma
steam pressures, gave entire satisfaction.*

*The safety valves were adjusted under steam to 155 lbs. on
main, & 60 lbs. on Auxiliary boiler.*

*The material used in the construction of Machinery and
the workmanship throughout*

*The Machinery is in my
L.M.C. 5-88. and I would be
the same to the favourable co
and be entered in the Societ*

The amount of Entry Fee : 0 : 0 received by me,
Special : 36 : 0 : 0
Donkey Boiler Fee : £ : :
Certificate (if required) : 14-5-1888
To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

FRIDAY 18 MAY 1888

+ Linc 5/88

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

REPORT ON MACHINERY. 3423

No. 3423.

Port of *Belfast*

Received at London Office 17 MAY 88

No. in Survey held at *Belfast*
Reg. Book.

Date, first Survey

Last Survey

18

on the *Auxiliary Boiler of S.S. "Lycia"* Tons

Master Built at *Belfast* By whom built *Victor Coates & Co. Pattern only made*

Engines made at By whom made *by Harland & Wolff fall plates supplied*

Boilers made at By whom made when made

Registered Horse Power Owners Port belonging to

ENGINES, &c.—

Description of Engines
Diameter of Cylinders Length of Stroke No. of Rev. per minute Point of Cut off, High Pressure Low Pressure
Diameter of Screw shaft Diam. of Tunnel shaft Diam. of Crank shaft journals Diam. of Crank pin size of Crank webs
Diameter of screw Pitch of screw No. of blades state whether moveable total surface
No. of Feed pumps diameter of ditto Stroke Can one be overhauled while the other is at work
No. of Bilge pumps diameter of ditto Stroke Can one be overhauled while the other is at work
Where do they pump from
No. of Donkey Engines Size of Pumps Where do they pump from

Are all the bilge suction pipes fitted with roses Are the roses always accessible Are the sluices on Engine room bulkheads always accessible
No. of bilge injections and sizes Are they connected to condenser, or to circulating pump
How are the pumps worked
Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks
Are 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
Are 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
What pipes are carried through the bunkers How are they protected
Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times
Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges
When were stern tube, propeller, screw shaft, and all connections examined in dry dock
Is the screw shaft tunnel watertight and fitted with a sluice door worked from

BOILERS, &c.—

Number of Boilers *one* Description *Cyl. Multitubular* Whether Steel or Iron *Steel*
Working Pressure *60 lbs.* Tested by hydraulic pressure to *120* Date of test *6th Oct. 1887. Cert 22*
Description of superheating apparatus or steam chest *none fitted*
Can each boiler be worked separately Can the superheater be shut off and the boiler worked separately
No. of square feet of fire grate surface in each boiler *23 3/4* Description of safety valves *Cockburns & Co's* No. to each boiler *two*
Area of each valve *7.075* Are they fitted with easing gear *yes* No. of safety valves to superheater area of each valve
Are they fitted with easing gear Smallest distance between boilers and bunkers or woodwork Diameter of boiler *8'-6"*
Length of boiler *9'-0"* description of riveting of shell long. seams *lap & double riv* Circum. seams *lap & double riv* Thickness of shell plates *3/8"*
Diameter of rivet holes *3/8"* whether punched or drilled *drilled* pitch of rivets *3"* Lap of plating *4 1/2"*
Per centage of strength of longitudinal joint *68* working pressure of shell by rules *71.6* size of manholes in shell *12" x 15"*
Size of compensating rings *Rectangular plate 24 x 27 1/2* No. of Furnaces in each boiler *two*
Outside diameter *30 3/8"* length, top *5'-9"* bottom *8'-0"* thickness of plates *3/8"* description of joint *double strapped & riv* if rings are fitted *no.*
Greatest length between rings working pressure of furnace by the rules *69.4 lbs* combustion chamber plating, thickness, sides *3/8"* back *3/8"* top *3/8"*
Pitch of stays to ditto, sides *9 1/2 x 9 1/2* back *9 1/2 x 9 1/2* top *9 1/2 x 9 1/2* If stays are fitted with nuts or riveted heads *nutted* working pressure of plating by
rules *63 lbs* Diameter of stays at smallest part *1.2"* working pressure of ditto by rules *84 lbs* plates in steam space, thickness *5/8"*
Pitch of stays to ditto *16 1/2 x 16 1/2* how stays are secured *double nuts & working pressure by rules 70 lbs. with 190 diameter of stays at*
smallest part *2 1/4" Iron* working pressure by rules *87.7 lbs* Front plates at bottom, thickness *3/8"* Back plates, thickness *5/8"*
Greatest pitch of stays *9 1/2"* working pressure by rules *141 lbs* Diameter of tubes *3 1/4" 9 1/2"* pitch of tubes *4 1/2"* thickness of tube
plates, front *5/8"* back *5/8"* how stayed *stay laced* pitch of stays *15" x 9"* width of water spaces *1 1/2" tubes next*
Diameter of Superheater or Steam chest length thickness of plates description of longitudinal joint diam. of rivet holes
Pitch of rivets working pressure of shell by rules diameter of flue thickness of plates If stiffened with rings
Distance between rings working pressure by rules end plates of superheater, or steam chest; thickness how stayed
Superheater or steam chest; how connected to boiler

Harland & Wolff manufacturer. *Belfast* - 0298
James Chaston Surveyor.

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 _____ 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 :—

The foregoing is a correct description,

Manufacturer.

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

The amount of Entry Fee .. £ : : received by me,

Special .. £ : :

Donkey Boiler Fee .. £ : :

Certificate (if required) .. £ : : 18

To be sent as per margin.

(Travelling Expenses, if any, £ _____)

Committee's Minute

FRIDAY 18 MAY 1898.

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



Lloyd's Register
Foundation