

REPORT ON MACHINERY.

Port of *Dundee*

Received at London Office *13 FEB 1899*

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

Date, first Survey *25th Aug, 1898* Last Survey *11th Feb 1899*
(Number of Visits *25*)

on the *Steel Screw Steamer No 31*

Tons { Gross *361.28*
Net *195.49*
When built *1899*

Master *G. Nelson* Built at *Montrou* By whom built *J. Luthie & Co*

Engines made at *Glasgow* By whom made *Hall Brown Buttery & Co* when made *1894*

Boilers made at *Glasgow* By whom made *J. Neilson & Son* when made *1898*

Registered Horse Power *✓* Owners *J. Constant* Port belonging to *London*

Tom. Horse Power as per Section 28 *52* Is Electric Light fitted *No*

ENGINES, &c.—Description of Engines *Compound; see Glasgow Report No 16635* No. of Cranks

Diameter of Cylinders	Length of Stroke	Revolutions per minute	Diameter of Screw shaft
<i>as per rule</i>			<i>as per rule</i>
Diameter of Tunnel shaft	Diameter of Crank shaft journals	Diameter of Crank pin	Size of Crank webs
<i>as fitted</i>			
Diameter of screw	Pitch of screw	No. of blades	State whether moveable
			Total surface
To. of Feed pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work
To. of Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work
To. of Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps	
<i>Two</i>	<i>6x6x3 1/4 feed</i>		
	<i>5 1/4 x 4 x 6 Ballast</i>		
In Engine Room	<i>Two = 2" diam</i>	In Hold, &c.	<i>Two = 2" diam</i>

To. of bilge injections *1* sizes *3 1/2"* Connected to condenser, or to circulating pump *yes* Is a separate donkey suction fitted in Engine room & size *yes - 2"*
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 *Both*
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*
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*
That pipes are carried through the bunkers *Hold suction* How are they protected *wood ceiling*
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*
Then were stern tube, propeller, screw shaft, and all connections examined in dry dock *not in dry dock* Is the screw shaft tunnel watertight *none*
Is it fitted with a watertight door *✓* worked from *✓*

BOILERS, &c.— (Letter for record *(5)*) Total Heating Surface of Boilers *895* Is forced draft fitted *no*

No. and Description of Boilers *see Glasgow Report No 16635* Working Pressure *130* Tested by hydraulic pressure to *260*
Date of test *✓* Can each boiler be worked separately *✓* Area of fire grate in each boiler *36* No. and Description of safety valves to
each boiler *Two Spring* Area of each valve *5.41* Pressure to which they are adjusted *134 lb* Are they fitted
with easing gear *yes* Smallest distance between boilers *or uptakes* and bunkers *on woodwork* *Back = 25 1/2"* Mean diameter of boilers *✓*
Length *✓* Material of shell plates *✓* Thickness *✓* Description of riveting: circum. seams *✓* long. seams *✓*
Diameter of rivet holes in long. seams *✓* Pitch of rivets *✓* Lap of plates or width of butt straps *✓*
Percentages of strength of longitudinal joint *✓* Working pressure of shell by rules *✓* Size of manhole in shell *✓*
Size of compensating ring *✓* No. and Description of Furnaces in each boiler *✓* Material *✓* Outside diameter *✓*
Length of plain part *top* *bottom* Thickness of plates *✓* Description of longitudinal joint *✓* No. of strengthening rings *✓*
Working pressure of furnace by the rules *✓* Combustion chamber plates: Material *✓* Thickness: Sides *✓* Back *✓* Top *✓* Bottom *✓*
Pitch of stays to ditto: Sides *✓* Back *✓* Top *✓* If stays are fitted with nuts or riveted heads *✓* Working pressure by rules *✓*
Material of stays *✓* Diameter at smallest part *✓* Area supported by each stay *✓* Working pressure by rules *✓* End plates in steam space: *✓*
Material *✓* Thickness *✓* Pitch of stays *✓* How are stays secured *✓* Working pressure by rules *✓* Material of stays *✓*
Diameter at smallest part *✓* Area supported by each stay *✓* Working pressure by rules *✓* Material of Front plates at bottom *✓*
Thickness *✓* Material of Lower back plate *✓* Thickness *✓* Greatest pitch of stays *✓* Working pressure of plate by rules *✓*
Diameter of tubes *✓* Pitch of tubes *✓* Material of tube plates *✓* Thickness: Front *✓* Back *✓* Mean pitch of stays *✓*
Pitch across wide water spaces *✓* Working pressures by rules *✓* Girders to Chamber tops: Material *✓* Depth and *✓*
Thickness of girder at centre *✓* Length as per rule *✓* Distance apart *✓* Number and pitch of Stays in each *✓*
Working pressure by rules *✓* Superheater or Steam chest; how connected to boiler *✓* Can the superheater be shut off and the boiler worked *✓*
separately *✓* Diameter *✓* Length *✓* Thickness of shell plates *✓* Material *✓* Description of longitudinal joint *✓* Diam. of rivet *✓*
plates *✓* Pitch of rivets *✓* Working pressure of shell by rules *✓* Diameter of flue *✓* Material of flue plates *✓* Thickness *✓*
stiffened with rings *✓* Distance between rings *✓* Working pressure by rules *✓* End plates: Thickness *✓* How stayed *✓*
Working pressure of end plates *✓* Area of safety valves to superheater *✓* Are they fitted with easing gear *✓*

DONKEY BOILER— Description *Home*

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 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 uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *As per Rule*

The foregoing is a correct description,

 Manufacturer.

Dates { During progress of work in shops - August 25. 31 : Sept 9. 15. 28.
 of Survey { During erection on board vessel - October 7. 26 ; Nov 2. 25 1898 ; Jan 11. 13. 14. 19. 21. 23. 26. 27. 28. 31 & Feb 11, 1899
 while building { Total No. of visits 20.

General Remarks (State quality of workmanship, opinions as to class, &c. *See Glasgow Report - No 16635*
ENGINES—Length of stern bush ✓ Diameter of crank shaft journals *as per rule* ✓ Diameter of thrust shaft under collars ✓
BOILERS—Range of tensile strength ✓ Are they welded or flanged ✓ **DONKEY BOILERS**—No. _____ Range of tensile strength ✓
 Is the approved plan of main boiler forwarded herewith ✓ Is the approved plan of donkey boiler forwarded herewith ✓

The machinery referred to in Glasgow Report No 16635 has now been satisfactorily fitted on board this vessel in general conformity with the Rules. The materials and workmanship are sound and good. The boiler and engines have been examined under steam and found satisfactory.
 The machinery of this vessel is now in a good and safe working condition and renders her eligible in my opinion to have the notation of *L.M.C. 2.99* (in red) in the Register Book.

It is submitted that
 this vessel is eligible for
THE RECORD. L.M.C. 2.99.

A.C.H.
 13.2.99

Glasgow
 certificate (if required) to be sent to _____
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

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

Committee's Minute **TUES. 14 FEB 1899**

Assigned _____

MACHINERY CERTIFICATE
 WRITTEN.

+ L.M.C. 2.99

Wm Morrison

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



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 Foundation