

REPORT ON MACHINERY.

Port of Dundee

Received at London Office 13 FEB 1899

No. in Survey held at Dundee Date, first Survey 25th Aug, 1898 Last Survey 11th Feb 1899
Reg. Book. (Number of Visits 20)

on the Steel Screw Steamer N^o 31 Tons ^{Gross} 361.28 _{Net} 195.49
Master G. Nelson Built at Montrose By whom built J. Guthrie & Co When built 1899

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

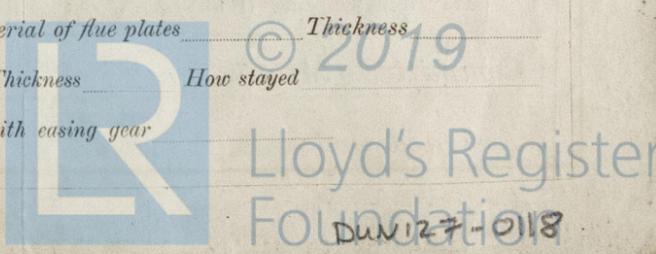
Registered Horse Power ✓ Owners J. Constant Port belonging to London

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 _____
Diameter of Tunnel shaft _____ Diameter of Crank shaft journals _____ Diameter 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 _____
No. of Donkey Engines Two Sizes of Pumps 6x6x3 1/4 feed No. and size of Suctions connected to both Bilge and Donkey pumps _____
In Engine Room Two = 2" diam In Hold, &c. Two = 2" diam

No. 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
What 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
When 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 sq ft 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 sq ft 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 bulkhead sides = 7 1/2" 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 _____ 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 *Horse*

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 casing gear _____ If steam from main boilers ca
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:— *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 $\frac{1}{2}$ L.M.C. 2.99 (in red) in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. $\frac{1}{2}$ 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, _____

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

Committee's Minute TUES. 14 FEB 1899
Assigned *+ L.M.C. 2.99*

