

REPORT ON MACHINERY.

Port of Glasgow

THUR, 21 JAN 1897

Received at London Office

No. in Survey held at Glasgow
Reg. Book.

Date, first Survey 7th April 1896 Last Survey 19th January 1897
(Number of Visits) 60

on the Screw Steamer "Dunolly Castle"

Gross Tonnage 4164
Net Tonnage 2636

Master J. L. Stainstreet Built at

By whom built Barclay Curle & Coy. When built 1896-7

Engines made at Glasgow By whom made

when made 1896-7

Boilers made at " By whom made

when made 1896-7

Registered Horse Power 2

Owners Castle Mail Packet Co. Ltd Port belonging to London

Nom. Horse Power as per Section 28 419

Donald Currie & Co.

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3

Diameter of Cylinders 26 1/2" 44" 40" Length of Stroke 48" Revolutions per minute 85 Diameter of Screw shaft 13 1/2"
as per rule 12 3/4" as fitted 14 1/2"

Diameter of Tunnel shaft 10 1/2" Diameter of Crank shaft journals 14" Diameter of Crank pin 11 1/2" Size of Crank webs 9 1/8" x 2 1/4"
as fitted 10 1/2"

Diameter of screw 16" 9" Pitch of screw 14 ft No. of blades 4 State whether moveable Yes Total surface 84 ft
on main

No. of Feed pumps None Diameter of ditto — Stroke — Can one be overhauled while the other is at work —

No. of Bilge pumps Two Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 5-2 1/2 Sizes of Pumps 1 Duplex 6" x 4" x 6" Carruthers & Co. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four - 3 1/2" 1 Duplex 10" x 6" x 8" 1 Duplex 10" x 14" x 10" In Holds, &c. Two in each 3 1/2"
duplex

No. of bilge injections One size 1 1/2" Connected to circulation to circulating pump — Is a separate donkey suction fitted in Engine room & size Yes - 1 1/2"

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 Salpeter ballast pipes to fore hold How are they protected By wood casing

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 On slip before launching Is the screw shaft tunnel watertight Yes

Is it fitted with a watertight door Yes worked from Upper platform

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 4161 ft Is forced draft fitted No

No. and Description of Boilers 2 main + 1 Auxiliary tubular Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 2/11/96 Can each boiler be worked separately Yes Area of fire grate in each boiler 53" x 42" No. and Description of safety valves to each boiler Two Direct Spring 18.29" 10.90"

with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 15" Mean diameter of boilers 16 1/2"

Length 10' 3 1/4" Material of shell plates Steel Thickness 1 1/2" Description of riveting: circum. seam Double riv. lap long seam Double butt straps

Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 10 1/4" Lap of plates or width of butt straps 2 1/8" x 1 1/2" 1 1/8" x 1 1/2"

Per centages of strength of longitudinal joint 84.8 + 84.5 Working pressure of shell by rules 190 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 1 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 3" small Furnaces Material Steel Outside diameter 3.6 3/4"

Length of plain part 6" 10" Thickness of plates 1 1/2" Description of longitudinal joint Belted No. of strengthening rings —

Working pressure of furnace by the rules 189 Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 1 1/4"

Pitch of stays to ditto: Sides 4 1/2" x 4 1/2" Back 4 1/2" x 4 1/2" Top 4 1/2" x 4 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 182

Material of stays Steel Diameter at smallest part 1 3/4" 1 1/2" Area supported by each stay 56" Working pressure by rules 204 lbs End plates in steam space: Material Steel Thickness 1 1/2" Pitch of stays 10 1/2" x 10 1/2" How are stays secured By double nuts Working pressure by rules 236 Material of stays Steel

Diameter at smallest part 6 3/8" Area supported by each stay 240" Working pressure by rules 226 Material of Front plates at bottom Steel

Thickness 1 3/16" Material of Lower back plate Steel Thickness 1 1/8" Greatest pitch of stays 13" Working pressure of plate by rules 264 lbs

Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" Material of tube plate Steel Thickness: Front 1 3/16" Back 1 3/16" Mean pitch of stays 10 1/8"

Pitch across wide water spaces 11 1/4" Working pressures by rules 211 lbs Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 8" x 1 1/2" Length as per rule 2' 4 1/2" Distance apart 4 1/2" Number and pitch of Stays in each 3 - 4 1/2"

Working pressure by rules 192 lbs Superheater or Steam chest; how connected to boiler None 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 holes — Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —

If 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 —

14928 g/s.

DONKEY BOILER— Description *None*

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: *One Propeller Shaft, brass & bronze blade, 2 top & 2 bottom, one connect. rod bolts, 2 main bearing bolts, 6 coupling bolts, 1 Air pump rod, bucket & valve, 1 set of crosshead, crank pin brasses, 1 slide valve spindle & cheek valves & seats, 1/2 set of suction of discharge valves & seats (bilge & feed pumps) piston Springs, bolts nuts & other gear*

The foregoing is a correct description,

Manufacturer. *Barclay Curle & Co. Limited*
James Gilchrist Director

Dates of Survey while building

During progress of work in shops - -	1896 April 4, 21, 30. May 1, 2, 4, 9, 13, 19, 21, 23, 24, 29. June 3, 4, 11, 16, 19, 23, 24, 24. July 1, 4, 10, 14, 24. Aug 6, 4, 11.
During erection on board vessel - -	15, 19, 22. Sept 2, 4, 20, 24, 29. Oct 9, 10, 14, 22, 30, 31. Nov 2, 3, 16, 26, 28. Dec 13, 11, 16, 14, 24, 26, 29. 1897 Jan 6, 8, 11, 15, 19.
Total No. of visits	60

General Remarks (State quality of workmanship, opinions as to class, &c.) *These Engines & Boilers are of good workmanship & materials and are now in good order and safe working condition & eligible in our opinion to be noted in the Register Book.*

Lloyd M.C. 1/97

Particulars of Refrigerating System

Kind of Machine	Maker's System	Type	Insulation	Insulated Cold & Heat
1	Hall	Carb. & Sulph.	Hall	Charcoal
				6000 ft Capacity

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 1.97

Blec. Light

L.S. 23.1.97
R.S. 23/1/97

The amount of Entry Fee. . . £ 3 : " : : When applied for, 11/11 1897

Special £ 40 : 19 : : When received, 12/11 1897

Donkey Boiler Fee £ " : " : :

Travelling Expenses (if any) £ " : " : :

James Molleson *A.M. Heard*
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

TUES 26 JAN 1897

Committee's Minute

Assigned *+ L.M.C. 1.97*
Electric light



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