

REPORT ON MACHINERY

J. V. U.

No. **9314** Port of **Glasgow** Received at London Office _____
 No. in Survey held at **Glasgow** Date, first Survey **12th June 1889** Last Survey **10th July 1889**
 Reg. Book. _____ (Number of Visits _____)
874 on the **Donkey Boiler for S.S. "Cloncurry"** Tons **2579**
 Master **Season** Built at **Sunderland** By whom built **Dofford & Sons** When built **1884**
 Engines made at **Sunderland** By whom made **Dofford & Sons** when made **1884**
 Boilers made at **do** By whom made **do** when made **1884**
 Registered Horse Power **260** Owners **McShraith** Port belonging to **London**

ENGINES, &c.—

Description of Engines _____
 Length of Stroke _____ No. of Rev. per minute _____ Point of Cut off, High Pressure _____ Low Pressure _____
 Diam. of Tunnel shaft _____ Diam. of Crank shaft journals _____ Diam. of Crank pin _____ size of Crank webs _____
 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.—

Donkey
 Number of Boilers **one** Description **Cylin Multit.** Whether Steel or Iron **Steel**
 Working Pressure **90 lbs** Tested by hydraulic pressure to **180 lbs** Date of test **10th July 1889**
 Description of superheating apparatus or steam chest **none**
 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 _____ Description of safety valves **Direct spring** No. to each boiler **2**
 Area of each valve **8.3** 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 boilers **8' 6"**
 Length of boilers **8' 0"** description of riveting of shell long. seams **treb rivet** circum. seams **doub. rivet** Thickness of shell plates **5/8"**
 Diameter of rivet holes **15/16"** whether punched or drilled **drilled** pitch of rivets **3 1/16"** Lap of plating **7/16"**
 Percentage of strength of longitudinal joint **77%** working pressure of shell by rules **107 lbs** size of manholes in shell **12" x 16"**
 Size of compensating rings **8" x 5/8"** No. of Furnaces in each boiler **2**
 Outside diameter **2' 7"** length, top **5' 9"** bottom **4' 6"** thickness of plates **1/2"** description of joint **doub. butt strp** if rings are fitted **on bottom**
 Greatest length between rings **5' 9"** working pressure of furnace by the rules **126 lbs** combustion chamber plating, thickness, sides **7/16"** back **7/16"** top **7/16"**
 Pitch of stays to ditto, sides **7' x 7 1/2"** back **7 1/2' x 7 1/2"** top **7' x 7 1/4"** If stays are fitted with nuts or riveted heads **nuts** working pressure of plating by rules **96 lbs** diameter of stays at smallest part **1"** working pressure of ditto by rules **114 lbs** plates in steam space, thickness **5/8"**
 Pitch of stays to ditto **14" x 14"** how stays are secured **Nuts rivetted** working pressure by rules **136 lbs** diameter of stays at smallest part **1 7/8"** working pressure by rules **120** Front plates at bottom, thickness **1/16"** Back plates, thickness **5/8"**
 Greatest pitch of stays **11 1/2"** working pressure by rules **105 lbs** Diameter of tubes **3 1/4"** pitch of tubes **4' 4"** thickness of tube plates, front **1/16"** back **1/16"** how stayed **tubes** pitch of stays **8' 12"** width of water spaces **10"**
 Diameter of Superheater or Steam chest **none** 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 _____

Form No. 1. Report is also sent to the Registrar of Shipping

Description of furnaces

9314 Gls

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 material used in the construction of this Boiler is of good quality, the boiler has been made under special survey & according to the rules of this Society, it has undergone a satisfactory hydraulic test in my presence, A Certificate of the same has been duly signed & sent to the maker

Charles Cooper
 Engineer Surveyor
 Glasgow

To be fitted on board at London
 James Mollison
 3/8/89

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

Special £ : : _____

Donkey Boiler Fee . . . £ 2 : 2 : _____

Certificate (if required) . . . £ : : _____ 2/8/1889

To be sent as per margin.

(Travelling Expenses, if any, £ _____)

Committee's Minute FRI 13 SEP 83

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

