Rpt. 5.

REPORT ON BOILERS.

No. 14509.

Port of Greenock

Received at London Office TUES. 12 DEC 1905

No. in Reg. Book. Survey held at Port Glasgow. Date, first Survey 25th July 1905 Last Survey 26th Nov 1905 (Number of Visits 37.)

on the SCREW STEAMER "DON CARLOS." Tons { Gross / Net

Master McPherson Built at Port Glasgow By whom built Clyde S.B. & Eng Co Ltd When built 1905.

Engines made at Port Glasgow By whom made Clyde S.B. & Eng. Co Ltd. when made 1905.

Boilers made at Port Glasgow. By whom made Clyde S.B. & Eng. Co Ltd. when made 1905.

Registered Horse Power Owners Port belonging to Lota.

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY OR~~ **DONKEY.**—Manufacturers of Steel Steel Coy of Scotland.

Letter for record S.) **Total Heating Surface of Boilers** 683 sq. ft. Is forced draft fitted No **No. and Description of Boilers** One Cylindr. Bult Single end **Working Pressure** 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 1/11/05.

No. of Certificate 730. Can each boiler be worked separately ✓ **Area of fire grate in each boiler** 24.7 □' No. and Description of safety valves to each boiler 2 Direct Spring. Area of each valve 3.14 □". Pressure to which they are adjusted 185 lbs.

Are they fitted with easing gear Yes. In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No.

Smallest distance between boilers or uptakes and bunkers or woodwork About 15". Mean dia. of boilers 9'.3". Length 9'.3".

Material of shell plates Steel Thickness 13/16" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No.

Descrip. of riveting: cir. seams Lap D'ble long. seams D'ble Butt Strap Diameter of rivet holes in long. seams 15/16" Pitch of rivets 2 rows 6", 1 row 3".

~~Lap of plates or~~ width of butt straps 15¼" Per centages of strength of longitudinal joint rivets 84.2 plate 84.4 Working pressure of shell by rules 181 lbs Size of manhole in shell 16"x12". Size of compensating ring 33"x27"x13/16". **No. and Description of Furnaces in each boiler** 2 plain Material Steel Outside diameter 33". Length of plain part top / bottom } 5'5". Thickness of plates crown / bottom } 5/8".

Description of longitudinal joint D.B.S. Surfed No. of strengthening rings None. Working pressure of furnace by the rules 186 lbs. Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 5/8" Top 9/16" Bottom 9/16". Pitch of stays to ditto: Sides 8½"x7" Back 8½"x9". Top 8½"x6⅛" If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 182 lbs Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 59□" x 74□" Working pressure by rules 190 lbs End plates in steam space: Material Steel Thickness 25/32". Pitch of stays 12½"x12" How are stays secured D'ble Nuts. Working pressure by rules 185 lbs Material of stays Steel Diameter at smallest part 1 13/16" Area supported by each stay 147□". Working pressure by rules 180 lbs Material of Front plates at bottom Steel Thickness 25/32 Material of lower back plate Steel Thickness 25/32 Greatest pitch of stays 9". Working pressure of plate by rules 283 lbs Diameter of tubes 3" Pitch of tubes 4½"x4½". Material of tube plates Steel Thickness: Front 25/32" Back 7/8". Mean pitch of stays 13". Pitch across wide water spaces 13". Working pressures by rules 258 lbs (Front) 186 lbs (Back bounding a wide space). Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8½"x1½" Length as per rule 28½" Distance apart 6⅛". Number and pitch of Stays in each 2: 8½". Working pressure by rules 292 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

W. R. Austin
Greenock

VERTICAL DONKEY BOILER— No. Description Manufacturers of steel

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 Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets / Plates Working pressure of shell by rules 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 Working pressure of furnace by rules Thickness of furnace crown plates Stayed by Diameter of uptake Thickness of uptake plates Thickness of water tubes

The foregoing is a correct description,

THE CLYDE SHIPBUILDING & ENGINEERING CO. LIMITED,

John Moir
Manufacturer. Director.

Dates Survey while building { During progress of work in shops - - / During erection on board vessel - - - / Total No. of visits

Is the approved plan of main boiler forwarded herewith ✓

" " " donkey " " " Yes

GENERAL REMARKS *(State quality of workmanship, opinions as to class, &c.*

The amount of Entry Fee...	£	:	:	When applied for, ... 19.....
Special	£	:	:	
Donkey Boiler Fee ...	£	:	:	When received, ... 19.....
Travelling Expenses (if any)	£	:	:	

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

Committee's Minute Glasgow 11 DEC 1905

Assigned See accompanying report. [illegible]

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

Certificate (if required) to be sent to