

REPORT ON MACHINERY.

Port of Glasgow.

WED. FEB 14 1900

Received at London Office

No. in Survey held at Glasgow.
Reg. Book.

Date, first Survey 14. April 1899 Last Survey 10 Feb 1900
(Number of Visits 49)

on the Screw Steamer "Canganian."

Tons { Gross 1142.67
Net 705.74

Master Mr Evans. Built at Glasgow. By whom built Macrie & Thomson

When built 1900.

Engines made at Glasgow. By whom made Ross & Duncan.

when made 1900.

Boilers made at Glasgow. By whom made Ross & Duncan.

when made 1900.

Registered Horse Power _____ Owners O & W. Williams

Port belonging to Cardiff

Nom. Hors. Power as per Section 28 122.

Is Refrigerating Machinery fitted No.

Is Electric Light fitted No.

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

Dia. of Cylinders 14" - 28" - 45" Length of Stroke 33" Revs. per minute 44. Dia. of Screw shaft 9.15" Lgth. of stern bush 39"

Dia. of Tunnel shaft 8.4" Dia. of Crank shaft journals 8.7" Dia. of Crank pin 9.4" Size of Crank webs 1 1/2 x 6 1/2 Dia. of thrust shaft under collars 9 1/4" Dia. of screw 12.3" Pitch of screw 13ft. to 15ft. No. of blades 4 State whether moveable No. Total surface 5259 sq. ft.

No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 76 1/2" Can one be overhauled while the other is at work Yes.

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work Yes.

No. of Donkey Engines Two. Sizes of Pumps 6 x 6 (Korthington) 9 x 9 x 12 (Lamont) No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four: 2 1/4" dia. In Holds, &c. Fore Holds: Two - 2" dia. After Hold: Two - 2" dia.

No. of bilge injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size Yes: 2 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 Awash.

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 None. How are they protected Yes.

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 New vessel Is the screw shaft tunnel watertight Yes.

Is it fitted with a watertight door Yes. worked from Top platform

BOILERS, &c.— (Letter for record \$.) Total Heating Surface of Boilers 1835 sq. ft. Is forced draft fitted No.

No. and Description of Boilers One: cylindrical multi. Single ended. Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs.

Date of test 1/12/99. Can each boiler be worked separately Yes. Area of fire grate in each boiler 60 sq. ft. No. and Description of safety valves to each boiler 2: Direct Spring Area of each valve 5.94 sq. in. Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork About 12" Mean dia. of boilers 15' 0" Length 10' 6" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 27-32 tons Are they welded or flanged No. Descrip. of riveting: cir. seams Lap double long. seams D. Butt Sharp.

Diameter of rivet holes in long. seams 1.76" Pitch of rivets 9" Lap of plates or width of butt straps 19"

Per centages of strength of longitudinal joint rivets 83. Working pressure of shell by rules 189 lbs. Size of manhole in shell 16" x 12"

Size of compensating ring 6 1/2" x 1 3/2" No. and Description of Furnaces in each boiler 3: Ribbed Material Steel Outside diameter 45"

Length of plain part 6.72" Thickness of plates 9.76" Description of longitudinal joint Welded. No. of strengthening rings Yes

Working pressure of furnace by the rules 181 lbs. Combustion chamber plates: Material Steel Thickness: Sides 32" Back 32" Top 32" Bottom 16"

Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8" Top 8" x 8" If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 191 lbs.

Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 64 sq. in. Working pressure by rules 185 lbs. End plates in steam space: Material Steel Thickness 1" Pitch of stays 16" x 16" How are stays secured D. lock washers Working pressure by rules 185 lbs. Material of stays Steel

Diameter at smallest part 2 3/16" Area supported by each stay 256 sq. in. Working pressure by rules 183 lbs. Material of Front plates at bottom Steel

Thickness 3/8" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 15 1/2" Working pressure of plate by rules 255 lbs.

Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 10.28"

Pitch across wide water spaces 14" Working pressures by rules 182 lbs. 195 lbs. Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 4 1/2" x 2 1/4" Length as per rule 21.6" Distance apart 8" Number and pitch of Stays in each 3: 8"

Working pressure by rules 189 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 _____

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 _____

