

REPORT ON MACHINERY.

No. 23342

Port of GlasgowReceived at London Office 12 DEC 1905No. in Survey held at GlasgowDate, first Survey 10 MayLast Survey 23 Nov 1905

Reg. Book.

Sup. 44 on the Steel Screw Steamer "Bessie Dollar"

(Number of Visits)

Gross 4300
Tons Net 2800

Master

Built at Port Glasgow By whom built Messrs A. Rodger & Co (390) When built 1905Engines made at GlasgowBy whom made Messrs A. Rodger & Co (127 Reg) when made 1905Boilers made at PaisleyBy whom made A. J. Craig & Co Ltd (369, 370, 371) when made 1905

Registered Horse Power

Owners Messrs Dollar & Co Port belonging to Victoria B.C.Nom. Horse Power as per Section 28 393Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Triple ExpansionNo. of Cylinders Three No. of Cranks ThreeDia. of Cylinders 25½ 42 70 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft 15" Material of screw shaft IronIs the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tightin the propeller boss Yes If the liner is in more than one length are the joints burned No If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If twoliners are fitted, is the shaft lapped for protected between the liners Yes Length of stern bush 5" 0"Dia. of Tunnel shaft 13½ Dia. of Crank shaft journals 13½ Dia. of Crank pin 13½ Size of Crank webs 20½ x 8½ Dia. of thrust shaft undercollars 13½ Dia. of screw 14-6 Pitch of screw 18" 0" No. of blades 4 State whether moveable Yes Total surface 91 sq ftNo. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work YesNo. of Donkey Engines Three Sizes of Pumps Two 7-5-8 duplex No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room Four 3½" In Holds, &c. Two 3½" in each of these holdsOne 3½" tunnel well suctionNo. of bilge injections 1 sizes 7" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes 3½"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 NoneAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Larger valves, smaller CocksAre 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 aboveAre 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 YesWhat pipes are carried through the bunkers Short bilge pipes in cross bunker How are they protected wooden casingAre all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges YesWhen were stern tube, propeller, screw shaft, and all connections examined in dry dock New metal Is the screw shaft tunnel watertight YesIs it fitted with a watertight door Yes worked from Upper Eng. Rm. platformBOILERS, &c.—No. of Certificate 7794 (Letter for record S) Total Heating Surface of Boilers 6399 Is forced draft fitted NoNo. and Description of Boilers Three Single Ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbsDate of test 5-10-05 Can each boiler be worked separately Yes Area of fire grate in each boiler 56.75 No. and Description of safety valves toeach boiler Two Direct Spring Area of each valve 5.94 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 15" Mean dia. of boilers 14-6" Length 11-0" Material of shell plates steelThickness 1½" Range of tensile strength 24 tons Are they welded or flanged No Descrip. of riveting: cir. seams DR L long. seams DR B.S.Diameter of rivet holes in long. seams 1½" Pitch of rivets 8½" Lap of plates or width of butt straps 18½"Per centages of strength of longitudinal joint 87.84 Working pressure of shell by rules 182 lbs Size of manhole in shell 18 x 12Size of compensating ring 7 x 1½ No. and Description of Furnaces in each boiler 3 Dighton Material steel Outside diameter 3' 9½"Length of plain part top Thickness of plates crown Description of longitudinal joint weld No. of strengthening rings —Working pressure of furnace by the rules 180 Combustion chamber plates: Material steel Thickness: Sides 7/8" Back 3/4" Top 7/8" Bottom 1/2"Pitch of stays to ditto: Sides 7½ x 9½ Back 9 x 9 Top 7½ x 9½ If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 lbsMaterial of stays steel Diameter at smallest part 2.07 Area supported by each stay 61 Working pressure by rules 200 End plates in steam space:Material steel Thickness 1½" Pitch of stays 18½ x 17½ How are stays secured DR nuts Working pressure by rules 182 Material of stays steelDiameter at smallest part 5.79 Area supported by each stay 322 Working pressure by rules 180 Material of Front plates at bottom steelThickness 1½" Material of Lower back plate steel Thickness 3/4" Greatest pitch of stays 15" Working pressure of plate by rules 190 lbsDiameter of tubes 3½" Pitch of tubes 4½" Material of tube plates steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 10 11/16"Pitch across wide water spaces 13½" Working pressures by rules 190 lbs Girders to Chamber tops: Material steel Depth andthickness of girder at centre 9½ x 3½ x 2 Length as per rule 31½ Distance apart 9½" Number and pitch of Stays in each 3 - 7½"Working pressure by rules 195 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler workedseparately — Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivetholes — 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 —

DONKEY BOILER— No. *None* Description *Donkey*

Made at *By whom made* Date of test *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 *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:— *Two crank pin bolts. Two crosshead bolts. Two main bearing bolts. Set of coupling bolts. Feed & help pump valves. Boiler tubes. Condenser tubes. Fire bars. Iron tankard bolts.*

The foregoing is a correct description,

Al. Rodger & Co. Manufacturer.

Dates of Survey while building *During progress of work in shops—* 1905: May 10. June 19. July 3. 11. 20. 21. 27. Aug 22. Sept 5. 9. 19. 27.
During erection on board vessel— Nov. 1. 9. 16. 23
 Total No. of visits *17*

Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " " None

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed & fitted under special survey & in accordance with the approved plan of the boilers. The workmanship is good. The machinery is a duplicate of that fitted on board the sister vessel "Kazel Dollar." Glas. Report. No. 22604.

It is submitted that The machinery is eligible for the record of + L.M.C. 11-05 in the Register.

It is submitted that this vessel is eligible for THE RECORD

L.M.C. 11-05. ELEC. LIGHT

13.12.05
13.12.05

The amount of Entry Fee. £ *37* : - :
 Special £ *39* : *13* :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :

When applied for, 11 DEC 1905

When received, 29 DEC 1905

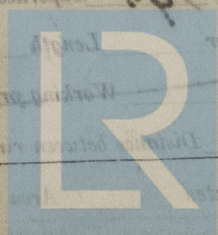
Glasgow 11 DEC 1905

Committee's Minute

Assigned

+ L.M.C. 11.05.

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



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