

REPORT ON MACHINERY.

Port of *Greenock*

THUR, 2 JUN 1898

Received at London Office

in Survey held at *Port Glasgow*Date, first Survey *2nd Nov. 1897* Last Survey *30th May 1898*Book. *Suppl.*

(Number of Visits)

7. on the *Steam Screw Steamer "J. E. Fuller"*Tons { Gross *399.*
Net *46.*Master *Mr. Thompson* Built at *Port Glasgow* By whom built *David J. Dunlop & Co.* When built *1898.*Machines made at *Port Glasgow* By whom made *David J. Dunlop & Co.* when made *1898.*Machinery made at *do* By whom made *do* when made *1898.*Registered Horse Power *206* Owners *Table Bay Harbour Board* Port belonging to *Cape Town.*Horse Power as per Section 28. *206.* Is Electric Light fitted *yes.*

ENGINES, &c.—Description of Engines *Inverted Direct Acting Triple Exp.* No. of Cylinders *Six* No. of Cranks *Three each*
 Diameter of Cylinders *14, 22 & 36, two of each* Length of Stroke *24* Revolutions per minute *145* Diameter of Screw shaft as per rule *6.96*
 Diameter of Tunnel shaft as fitted *6.29* Rule *6.63* Diameter of Crank shaft journals *6.34* Diameter of Crank pin *6.34* Size of Crank webs *10 x 4.34*
 Diameter of screws *8" 9"* Pitch of screws *9" 6"* No. of blades *Four* State whether moveable *no* Total surface *35 sq in each*
 Diameter of ditto *2 1/2* Stroke *12* Can one be overhauled while the other is at work *yes*
 Diameter of ditto *2 3/4* Stroke *12* Can one be overhauled while the other is at work *yes*
 Sizes of Pumps *both 3 1/4 x 6* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Holds, &c. *One 2 1/4 & one 2 1/4 in tunnel.*

of bilge injections *Two* sizes *4 1/4* Connected to condenser, or to circulating pumps *is pump a separate donkey suction fitted in Engine room & size yes 2 1/4*
 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*
 all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *Both.*
 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 *little below*
 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*
 at pipes are carried through the bunkers *Sea suction for Fire engine pump.* How are they protected *Wood casing.*
 all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times *yes.*
 the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *yes*
 in were stern tube, propeller, screw shaft, and all connections examined in dry dock *on ship before.* Is the screw shaft tunnel watertight *yes.*
 fitted with a watertight door *yes* worked from *Top platform.*

BOILERS, &c.—(Letter for record *S*) Total Heating Surface of Boilers *4215 sq ft* Is forced draft fitted *no.*
 and Description of Boilers *Two Cylindrical Multitubular* Working Pressure *170 lbs* Tested by hydraulic pressure to *340 lbs*
 of test *24.3.98* Can each boiler be worked separately *yes* Area of fire grate in each boiler *63 sq ft* No. and Description of safety valves to
 boiler *Two Direct Spring* Area of each valve *7.04 sq in* Pressure to which they are adjusted *175 lbs* Are they fitted
 easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *9 1/2* Mean diameter of boilers *15" 1 1/2*
 with *10" 0"* Material of shell plates *Steel* Thickness *1 1/8* Description of riveting: circum. seams *Lap double* long. seams *Double*
 diameter of rivet holes in long. seams *1 3/16* Pitch of rivets *8 3/8 & 4 3/16* Lap of plates or width of butt straps *17 7/8 Straps*
 percentages of strength of longitudinal joint *87.4* Working pressure of shell by rules *170.5 lbs* Size of manhole in shell *16 3/4 x 12 3/4*
 of compensating ring *31 x 31 x 1 1/8* No. and Description of Furnaces in each boiler *3 Suspension* Material *Steel* Outside diameter *47*
 length of plain part *top 17" bottom 32"* Thickness of plates *top 1 1/8" bottom 32"* Description of longitudinal joint *Welded* No. of strengthening rings
 working pressure of furnace by the rules *174 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *19" 32* Back *19" 32* Top *19" 32* Bottom *7 1/8*
 of stays to ditto: Sides *9 1/8 x 7 1/4* Back *9 1/8 x 7 1/4* Top *9 1/8 x 7 1/4* If stays are fitted with nuts or riveted heads *nuts.* Working pressure by rules *179.6 lbs*
 material of stays *Steel* Diameter at smallest part *1 3/8 1 1/2* Area supported by each stay *4 1/2 to 7 1/2* Working pressure by rules *170 lbs* End plates in steam space:
 material *Steel* Thickness *29" 32* Pitch of stays *15 1/8 x 15* How are stays secured *Double nuts* Working pressure by rules *171 lbs* Material of stays *Steel*
 diameter at smallest part *2 1/4* Area supported by each stay *22 1/2* Working pressure by rules *172 lbs* Material of Front plates at bottom *Steel*
 thickness *3/4* Material of Lower back plate *Steel* Thickness *3/4* Greatest pitch of stays *14 1/4* Working pressure of plate by rules *241 lbs*
 diameter of tubes *3 1/2* Pitch of tubes *4 3/4 x 4 3/4* Material of tube plates *Steel* Thickness: Front *13 1/8 16* Back *13 1/8 16* Mean pitch of stays *11 1/8*
 across wide water spaces *14 1/2* Working pressures by rules *204 lbs* Girders to Chamber tops: Material *Steel* Depth and
 thickness of girder at centre *7 x 3 1/2* Length as per rule *28"* Distance apart *7 1/4* Number and pitch of Stays in each *Two 9 1/8*
 working pressure by rules *190 lbs* Superheater or Steam chest; how connected to boiler *Can the superheater be shut off and the boiler worked*
 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
 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—

Description *none fitted in this vessel, a small McAlister water boiler fitted for fire pump engine for salting purposes*
 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 boiler _____
 enter the donkey boiler *no* 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 _____ Descript _____
 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:— *1 Crank shaft. 1 screw shaft. 2 bronze propellers. 1 pair crank pin bushes. 3 top & 3 bottom end bolts & nuts. 3 main bearing bolts & nuts. 6 coupling bolts. 1 air pump rod. 1 air pump valves. 2 feed & 2 bilge pump valves. 2 safety valve springs for main boilers. 1 set Ramsbottom rings for each sized piston.*

The foregoing is a correct description,

David J. Dunlop & Co. Manufacturer.
per J. A. Lade

Dates { During progress of work in shops - *1897 Nov 2, 5, 9, 11, 12, 15, 17, 20, 22, 26, 29* Dec 1, 3, 6, 8, 10, 14, 15, 21, 23, 28, 30. 1898 Jan 13, 19, 21, 24, 26, 28 Feb 1, 3, 5, 7, 11, 13, 18, 19, 20, 22, 26, 30 May 1, 3, 5, 7, 11, 13, 18, 19, 20, 22, 26, 30
 of Survey { During erection on board vessel - *8, 10, 14, 17, 22, 24, 25, 28* March 3, 4, 7, 10, 14, 15, 16, 18, 21, 24, 26, 29, 31 April 2, 5, 7, 11, 13, 18, 19, 20, 22, 26, 30 May 1, 3, 5, 7, 11, 13, 18, 19, 20, 22, 26, 30
 while building { Total No. of visits *10, 13, 17, 23, 24, 30.* *2/1.*

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

*These Engines and Boilers were specially surveyed during construction workmanship good. Shafts examined when being turned found apparently sound. Main Steam pipes tested by hydraulic pressure to 340 lbs per square inch and found satisfactory. The Engines and Boilers are satisfactorily fitted in vessel and have been tested under full steam they are now in good order and safe working condition and are in opinion eligible to be noted in Register Book. **LMC 5.98.***

Spare gear Continued

20 tubes & 50 packing ferrules for surface Condenser. 12 tubes for main boiler. 150 fire bars. 1 set mid bearers. a quantity of bolts, nuts & iron assorted.

It is submitted that
 this vessel is eligible for
 THE RECORD.

+ L.H.C. 5,98 8th light.

2/16/98

The amount of Entry Fee. £ *2* : " : " When applied for, _____
 Special £ *30* : *6* : " *1st June 1898 B. 678*
 Donkey Boiler Fee £ " : " : " When received, _____
 Travelling Expenses (if any) £ " : " : " _____

Committee's Minute **FRI 3 JUN 1898**

Assigned

+ LMC 5,98

8th light

CA C. Y. Cron
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping
 Greenwich District.

Lloyd's Register
 Foundation