

REPORT ON MACHINERY.

JRK 12504

TUES. 17 OCT 1899

Port of Glasgow.

Received at London Office

No. in Survey held at Glasgow
Reg. Book.Date, first Survey 27. MarchLast Survey 11 October 1899(Number of Visits 40)on the Screw Steamer "Ino"Gross
Tons
NetWhen built 1899.Master Built at Campbeltown By whom built Campbeltown & CoEngines made at Glasgow. By whom made Hutson & Sons Limd. when made 1899.Boilers made at Glasgow. By whom made Hutson & Sons Limd. when made 1899.

Registered Horse Power

Owners

Port belonging to BristolNom. Horse Power as per Section 28 120Is Electric Light fitted NoENGINES, &c.—Description of Engines Triple expansionNo. of Cylinders ThreeNo. of Cranks ThreeDiameter of Cylinders 18"-24½"-45" Length of Stroke 33" Revolutions per minute 80 Diameter of Screw shaft 9" as per rule 9.895Diameter of Tunnel shaft 8" as fitted 8" Diameter of Crank shaft journals 8½" Diameter of Crank pin 8½" Size of Crank webs 11½" x 5½" by ruleDiameter of screw 12' 3" Pitch of screw 14' 6" No. of blades 4 State whether moveable Yes Total surface 48 sq. ft.No. of Feed pumps 2 Diameter of ditto 2¼" Stroke 14" Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 2¼" Stroke 14" Can one be overhauled while the other is at work YesNo. of Donkey Engines Two Sizes of Pumps (9" x 4½" x 8") (8" x 10" x 10") No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room Four 2" dia. In Holds, &c. Fore Hold: Two-2½" dia. Main Hold: Two-2½" dia. After Hold: Two-2½" dia. Aftermost Hold: One-2½" dia. Tunnel Well: One-2½" dia.No. of bilge injections 1 sizes 3½" Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size Yes: 2½"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 YesAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks BothAre 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 BelowAre 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 None How are they protected YesAre 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 vessel Is the screw shaft tunnel watertight YesIs it fitted with a watertight door Yes worked from Top platformBOILERS, &c.—(Letter for record A) Total Heating Surface of Boilers 1841 Sq. ft. Is forced draft fitted NoNo. and Description of Boilers One: Cylindrical: Single Ended Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbsDate of test 12/9/99 Can each boiler be worked separately Yes Area of fire grate in each boiler 65 sq. ft. No. and Description of safety valves to each boiler Two: Direct Spring Area of each valve 7.06" Pressure to which they are adjusted 165 lbs Are they fitted with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork Alt 9" Mean diameter of boilers 14' 3"Length 10' 6" Material of shell plates Steel Thickness 1½" Description of riveting: circum. seams Lap Double long. seams OTB ShapeDiameter of rivet holes in long. seams 1¼" Pitch of rivets 9" 4½" Lap of plates or width of butt straps 18½"Per centages of strength of longitudinal joint 93 plate 86 Working pressure of shell by rules 164 lbs Size of manhole in shell 16" x 12"Size of compensating ring 7½" x 13½" No. and Description of Furnaces in each boiler 3: Ribbed Material Steel Outside diameter 3' 7"Length of plain part 7' 0" Thickness of plates 1½" Description of longitudinal joint Weld No. of strengthening rings —Working pressure of furnace by the rules 162 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 7/16"Pitch of stays to ditto: Sides 8" x 8½" Back 8" x 8" Top 8" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 163 lbsMaterial of stays Iron Diameter at smallest part 1½" Area supported by each stay 64" Working pressure by rules 160 lbs End plates in steam space:Material Steel Thickness 15/16" Pitch of stays 16" x 16½" How are stays secured Stale nuts Working pressure by rules 161 lbs Material of stays IronDiameter at smallest part 2½" Area supported by each stay 260" Working pressure by rules 160 lbs Material of Front plates at bottom SteelThickness 13/16" Material of Lower back plate Steel Thickness ¾" Greatest pitch of stays 11½" Working pressure of plate by rules 160 lbsDiameter of tubes 3½" Pitch of tubes 4½" x 4½" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 10' 4"Pitch across wide water spaces 14½" Working pressures by rules 205 lbs Girders to Chamber tops: Material Iron Depth andthickness of girder at centre 7½" x 13½" Length as per rule 29' Distance apart 8' Number and pitch of Stays in each 2: 8'Working pressure by rules 181 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

DONKEY BOILER— Description *Multitubular*
Made at *Gateshead* By whom made *Clarke, Chapman & Co* When made *22/8/99* Where fixed *In Stokenold*
Working pressure *80#* Tested by hydraulic pressure to *160#* No. of Certificate *5578* Fire grate area *22 #* Description of safety valves *One & one*
No. of safety valves *1* Area of each *11 #* Pressure to which they are adjusted *84#* If fitted with easing gear *Yes* If steam from main boilers
enter the donkey boiler *No* Diameter of donkey boiler *9'0"* Length *8'0"* Material of shell plates *Steel* Thickness *3/4"*
Description of riveting long. seams *J. R. Lap* Diameter of rivet holes *1 1/16"* Whether punched or drilled *Drilled* Pitch of rivets *2 1/4"*
Lap of plating *6 1/2"* Per centage of strength of joint Rivets *8.0.8* Thickness of shell *End* plates *5"* Radius of *do.* Pitch No. of Stays to *do.* *13 1/2 x 15 8*
Dia. of stays *1 5/8"* Diameter of furnace *Top 31 3/4"* Bottom *31"* Length of furnace *5'3"* Thickness of furnace plates *13/32"* Description of
joint *S. R. Lap* Thickness of *Comer. Cor.* plates *1/2"* Stayed by *1 1/8" Stays 4 1/2 x 8 1/2"* Working pressure of shell by rules *86#*
Working pressure of furnace by rules *102#* Diameter of *tubes* *3"* Thickness of *tube* plates *5/8"* Thickness of *stay* tubes *1/4"*

SPARE GEAR. State the articles supplied:— *2 main Bearing Bolts, 2 Crank pin Bolt*
2 Crosshead Bolts, 1 Set Coupling Bolts, 1 Set Air pump valves, 1 Set C
pump valves, 1 Set Feed & Bilge pump valves, 2 Propeller Blade
spare studs for same. Bolt assorted sizes Iron granious eyes.

The foregoing is a correct description,

Hutton & Sons Ltd. Manufacturer.
Curthwaite

Dates of Survey
During progress of work in shops— *1899: Mar. 27. 30. Apr. 7. 11. 18. 25. 28. May. 5. 8. 16. 22. June. 8. 15. 20. 22. 27. 28. July. 4. 5. 10. 2*
During erection on board vessel— *8. 16. 25. 28. 31. Sep. 12. 16. 20. 26. 27. Oct. 2. 3. 4. 5. 7. 9. 10. 11.*
Total No. of visits *40*

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

ENGINES—Length of stern bush *36"* Diameter of crank shaft journals *as per rule 8.6* Diameter of thrust shaft under collars *8*
as fitted 8 5/8"
BOILERS—Range of tensile strength *27 3/32 tons* Are they welded or flanged *No* **DONKEY BOILERS**—No. *1* Range of tensile strength
Is the approved plan of main boiler forwarded herewith *Yes* Is the approved plan of donkey boiler forwarded herewith *No*

The Engines and Boilers of this vessel have been in
under special survey and the materials & workman
are good. When completed they were examined and
full steam and worked satisfactorily.

The machinery throughout is now in good and safe
working condition and eligible in my opinion to be
the record of *L.M.C. 10, 99* marked in the Society's Rep
Book.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 10.99.

J.S.
17.10.99

17/10/99

The amount of Entry Fee... £ *2* : : : : When applied for, *13/10/99*
Special ... £ *18* : : : :
Donkey Boiler Fee ... £ : : : : When received, *16/10/99*
Travelling Expenses (if any) £ : : : :

Committee's Minute

OCT 20 1899

MACHINERY CERTIFICATE
WRITTEN

Assigned

+ L.M.C. 10, 99

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



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Lloyd's Register
Foundation

Under Tonnage D
Closed-in spaces al
Space or spaces
Poop ... *13*
Forecastle ...
Round House
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