

# REPORT ON MACHINERY.

No. 13845.

Port of Glasgow

SAT, 17 AUG 1895

Received at London Office 18

No. in Survey held at Glasgow  
Reg. Book.

Date, first Survey 14 Novemr 1894 Last Survey 13 Aug 1895

(Number of Visits.....)

on the

S. S. Moyune

Tons { Gross 4646  
Net 3016

Master A. H. Knappe Built at Glasgow By whom built J. & W. Henderson & Co When built 1895

Engines made at Glasgow By whom made J. & W. Henderson & Co when made 1895

Boilers made at Glasgow By whom made J. & W. Henderson & Co when made 1895

Registered Horse Power 459 Owners China Mut. S. N. Coy Ltd Port belonging to London

Nom. Horse Power as per Section 28 459

ENGINES, &c.— Description of Engines Triple Expansion No. of Cylinders Three  
Diameter of Cylinders 27, 46 & 76" Length of Stroke 60" Revolutions per minute 80 Diameter of Screw shaft as per rule 13.58  
Diameter of Tunnel shaft as fitted 14.58 Diameter of Crank shaft journals 15 1/2 Diameter of Crank pin 15 1/2 Size of Crank webs Built  
Diameter of screw 18-0" Pitch of screw 17-6" No. of blades 4 State whether moveable Yes Total surface 104 sq. ft.  
No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 30" Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 30" Can one be overhauled while the other is at work Yes  
No. of Donkey Engines 4 Sizes of Pumps 1 1/2 in 8" x 10" x 21" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 3. 3 1/2" dia 1 Duplex 10" x 6" x 10" 1 do 4 1/2" x 2 1/2" x 4" In Holds, &c. 1. 3 1/2" dia & tunnel or 1. 3 1/2"  
1 Pulsometer

No. of bilge injections 1 sizes 8 1/2" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes 3 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 above  
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 bilge suction How are they protected wood box  
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 on Works Is the screw shaft tunnel watertight Yes  
Is it fitted with a watertight door Yes worked from top platform

BOILERS, &c.— (Letter for record (3)) Total Heating Surface of Boilers 7068 sq. ft.  
No. and Description of Boilers 3. S.E. Mult-Rowlinson Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs  
Date of test 18.6.95 Can each boiler be worked separately Yes Area of fire grate in each boiler 62.7 sq. ft. No. and Description of safety valves to each boiler 2. direct spring Area of each valve 13.36 Pressure to which they are adjusted 182 lbs Are they fitted with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 20" Mean diameter of boilers 15'-0"  
Length 11'-6" Material of shell plates Steel Thickness 1 7/16" Description of riveting: circum. seams double lap long. seams Butt double  
Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 9" x 4 1/2" Lap of plates or width of butt straps 21 1/2"  
Per centages of strength of longitudinal joint 84.8 Working pressure of shell by rules 195 lbs Size of manhole in shell 12" x 16"  
Size of compensating ring 34 x 30 x 1 7/16" No. and Description of Furnaces in each boiler 3. Adamson Material Steel Outside diameter 46 3/4"  
Length of plain part top 20 1/2" Thickness of plates crown 5/8" Description of longitudinal joint welded No. of strengthening rings 4  
Working pressure of furnace by the rules 195 lbs Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 9/16" Bottom 7/8"  
Pitch of stays to ditto outs. 9 1/2" Sides 7 3/8" Back 8 1/4" Top 7 3/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 198 lbs  
Material of stays Steel Diameter at smallest part 1.59" Area supported by each stay 68.06 Working pressure by rules 195 lbs End plates in steam space:  
Material Steel Thickness 29/32" Pitch of stays 16 x 16 1/2" How are stays secured d. nuts Working pressure by rules 180 lbs Material of stays Steel  
Diameter at smallest part 2.715" Area supported by each stay 268 Working pressure by rules 200 lbs Material of Front plates at bottom Steel  
Thickness 1 3/16" Material of Lower back plate Steel Thickness 1 3/16" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 180 lbs  
Diameter of tubes 2 1/2" Pitch of tubes 3 5/8" x 3 3/4" Material of tube plates Steel Thickness: Front 1 3/16" Back 3/4" Mean pitch of stays 7 1/16"  
Pitch across wide water spaces 13 1/2" Working pressures by rules 180 lbs by def Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 1/4" x 3 1/4" Length as per rule 28 1/2" Distance apart 6 Number and pitch of Stays in each 3. 7 3/8"  
Working pressure by rules 190 lbs Superheater or Steam chest; how connected to boiler — Can the superheater be shut off and the boiler worked 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 —



13875 gls

**DONKEY BOILER—** Description *Multitubular*  
Made at *Glasgow* By whom made *J. W. Henderson & Co* When made *1895* Where fixed *deck house*  
Working pressure *180 lbs* tested by hydraulic pressure to *360 lbs* No. of Certificate *3863* Fire grate area *29.3* Description of safety valves *dis. spring*  
No. of safety valves *2* Area of each *7"* Pressure to which they are adjusted *180 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *9'-6"* Length *8'-0"* Material of shell plates *steel* Thickness *15/16"*  
Description of riveting long seams *d. butt str.* Diameter of rivet holes *1 1/16"* Whether punched or drilled *drilled* Pitch of rivets *6 1/2"*  
*Butt sec.* Rivets *84.1* Steam space *13 1/2"* Thickness of shell crown plates *1 1/16"* Radius of do. *Pitch* No. of Stays to do *14"*  
Lap of plating *16 1/2"* Per centage of strength of joint *83.6* Thickness of furnace crown plates *17/32"* Stayed by *1 3/8 to 1 1/4"* Stays Working pressure of shell by rules *190 lbs*  
Dia. of stays *2 1/2"* Diameter of furnace Top *33 3/16"* Bottom *—* Length of furnace *5'-9"* Thickness of furnace plates *19/32"* Description of joint *welded* Thickness of furnace crown plates *17/32"* Stayed by *1 3/8 to 1 1/4"* Stays Working pressure of shell by rules *190 lbs*  
Working pressure of furnace by rules *192 lbs* Diameter of uptake *13"* Thickness of uptake plates *F. 13/16"* Thickness of water tubes *—*

**SPARE GEAR.** State the articles supplied:— *Propeller shaft, 4 blades, pump rod for air and circulating pumps. Thrust shaft. One piece crank shaft. Crank pin bushes & bolts. Valve spindles. Feed and bilge pump valves top end bolts. Main bearing & coupling bolts. &c.*

The foregoing is a correct description,  
*David W. Henderson & Co* Manufacturer.

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The engines and boilers mentioned above and other side have been built under special survey and are of good workman-ship and material. They have been well fitted on board and on completion tried under steam with satisfactory results. The vessel's machinery is now in my opinion eligible & is noted:—L.M.C. 8.95. in the Society's Register Book. —*

*Writer print retained for duplicate  
Appended Report on Chaptling —*

*It is submitted that  
this vessel is eligible for  
THE RECORD + L.M.C. 8.95.*

*H.S.  
20.8.95.*

Certificate (if required) to be sent to *Glasgow*

The amount of Entry Fee..	£ 3 : " : "	When applied for, <i>15/8 18.95</i>
Special .. .. .	£ 42 : 19 : "	
Donkey Boiler Fee .. .. .	£ " : " : "	When received, <i>16/8 18.95</i>
Travelling Expenses (if any) £	" : " : "	

*John Sanderford*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 20 AUG 1895

Assigned

*+ L.M.C. 8.95*

*Glasgow.*  
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Foundation