

# REPORT ON MACHINERY.

No. 12948

THURS. 17 MAY 1894

Port of *Glasgow*

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

Date, first Survey *1<sup>st</sup> February* Last Survey *9<sup>th</sup> May 1894*  
(Number of Visits *19*)

on the *P. P. "Esperoy"*

Master *Not appointed* Built at *Glasgow* By whom built *MacKie & Thomson* Tons *Gross 156 Net 59* When built *1894*

Engines made at *Glasgow* By whom made *Smith & Houston* when made *1894*

Boilers made at *Glasgow* By whom made *Smith & Houston* when made *1894*

Registered Horse Power *45* Owners *Great Northern S. S. Fishing Co. Ltd.* Port belonging to *Mcull*

Nom. Horse Power as per Section 28 *39.87*

ENGINES, &c.— Description of Engines *Triple expansion* No. of Cylinders *three*  
Diameter of Cylinders *11-17-27 1/2"* Length of Stroke *20"* Revolutions per minute *as per rule 5.18*  
Diameter of Tunnel shaft *as per rule 4.825* Diameter of Crank shaft journals *5 3/8"* Diameter of Crank pin *5 3/8"* Size of Crank webs *10" x 3 1/2"*  
Diameter of screw *7-3* Pitch of screw *9'-6"* No. of blades *4* State whether moveable *no* Total surface *20 sq ft*  
No. of Feed pumps *on* Diameter of ditto *2 1/2"* Stroke *10"* Can one be overhauled while the other is at work *✓*  
No. of Bilge pumps *on* Diameter of ditto *2 3/4"* Stroke *10"* Can one be overhauled while the other is at work *✓*  
No. of Donkey Engines *on* Sizes of Pumps *5" x 2 1/2" x 5"* No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room *three 2"* In Holds, &c. *one 2"*

No. of bilge injections *on* sizes *2 1/2"* Connected to condenser, or to circulating pump *pumps a separate donkey suction fitted in Engine room & size 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 *no*  
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 *none* How are they protected *✓*  
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 *before launch* the screw shaft tunnel watertight *none*  
Is it fitted with a watertight door *✓* worked from *✓*

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *890 sq ft*  
No. and Description of Boilers *one cylindrical return tube* Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs*  
Date of test *25/4/94* Can each boiler be worked separately *✓* Area of fire grate in each boiler *30 sq ft* No. and Description of safety valves to each boiler *one pair direct spring* Area of each valve *3.97 sq in* Pressure to which they are adjusted *160 lbs* Are they fitted with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *12"* Mean diameter of boilers *10-0*  
Length *9'-0"* Material of shell plates *steel* Thickness *3/32* Description of riveting: circum. seams *Lap single* long. seams *double butt*  
Diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *7 1/2"* Lap of plates or width of butt straps *17"*  
Per centages of strength of longitudinal joint *riets. 94 plate 85* Working pressure of shell by rules *163 lbs* Size of manhole in shell *16" x 12"*  
Size of compensating ring *W. R. 10* No. and Description of Furnaces in each boiler *two plain* Material *steel* Outside diameter *37"*  
Length of plain part *top 5'-9" bottom 8'-0"* Thickness of plates *crown 4/16" bottom 4/16" x 3/4"* Description of longitudinal joint *Welded* No. of strengthening rings *none*  
Working pressure of furnace by the rules *164 lbs* Combustion chamber plates: Material *steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *3/4"*  
Pitch of stays to ditto: Sides *8 x 8* Back *8 x 8* Top *8 x 7* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *170 lbs*  
Material of stays *steel* Diameter at smallest part *1.45"* Area supported by each stay *64 sq in* Working pressure by rules *181 lbs* End plates in steam space:  
Material *steel* Thickness *3/32* Pitch of stays *14"* How are stays secured *double nuts & washers* Working pressure by rules *172 lbs* Material of stays *steel*  
Diameter at smallest part *3.49* Area supported by each stay *196 sq in* Working pressure by rules *160 lbs* Material of Front plates at bottom *steel*  
Thickness *4/16"* Material of Lower back plate *steel* Thickness *1 1/16"* Greatest pitch of stays *11 1/2"* Working pressure of plate by rules *244 lbs*  
Diameter of tubes *3 1/2"* Pitch of tubes *4 1/2"* Material of tube plates *steel* Thickness: Front *4/16" x 1/16"* Back *4/16"* Mean pitch of stays *9"*  
Pitch across wide water spaces *13 1/2" x 11 1/2"* Working pressures by rules *184 & 209* Girders to Chamber tops: Material *iron* Depth and thickness of girder at centre *6" x 1 1/2"* Length as per rule *24"* Distance apart *7"* Number and pitch of Stays in each *two 8"*  
Working pressure by rules *180 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

GLS 169-0440



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DONKEY BOILER— Description *none*

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 boilers can enter the donkey boiler \_\_\_\_\_

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 \_\_\_\_\_ 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:— *Four connecting rod bolts & nuts (top & bottom ends) two main bearing bolts, one set of coupling bolts, one set of feed & bidge pump valves, bolts nuts & washers of various sizes*

The foregoing is a correct description,  
*Wm. Houston* Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *Engines & boiler the particulars of which are given on the other side) have been constructed under special survey. The materials & workmanship are of good description, they have been well fitted on board. Steam has been raised on the boiler, the safety valves adjusted & the engines tried under steam.*

*It is submitted that this machinery is eligible to have notification* \*L.M.C 5-94

*It is submitted that this vessel is eligible for THE RECORD + L.M.C 5,94*

*J. R. R.*  
*17-5-94*

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

MACHINERY CERTIFICATE WRITTEN.

The amount of Entry Fee..	£ 1 : " : "	When applied for,
Special .. .. .	£ 8 : " : "	15/5/94
Donkey Boiler Fee .. .. .	£ " : " : "	When received,
Travelling Expenses (if any) £	" : " : "	15/5/94

*A. McHard*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI 18 MAY 1894*

Assigned *+ L.M.C 5,94*