

# REPORT ON MACHINERY.

No. 14225

Received at London Office **FRI DEC 28 1917**

Date of writing Report *8 Dec 1917* When handed in at Local Office *13 Dec 1917* Port of *Greenock*  
 No. in Survey held at *Port Glasgow* Date, First Survey *7<sup>th</sup> February 1916* Last Survey *12 December 1917*  
 Reg. Book. *1247* on the *Steel Steamer "Adgarloch"* (Number of Visits *88*)  
 Master *Built at Port Glasgow* By whom built *Ferguson Bros* Tons *Gross 541*  
 Engines made at *Port Glasgow* By whom made *Ferguson Bros* when made *1917* Net *416*  
 Boilers made at *Port Glasgow* By whom made *The Clyde & S. I. Co Ltd* when made *1917*  
 Registered Horse Power *Owners and Captain Ltd - Lang. Fuels* Port belonging to *Greenock*  
 Nom. Horse Power as per Section 28 *114* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *no*

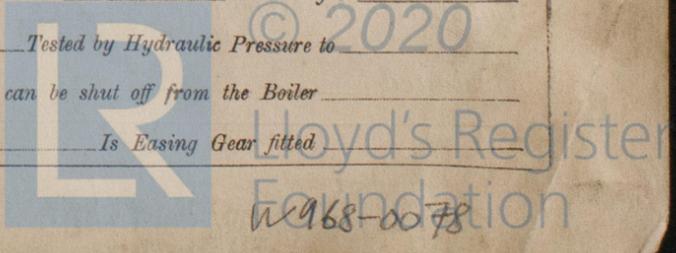
Reg. No. 14225

**ENGINES, &c.**—Description of Engines *Triplic Combined* No. of Cylinders *Three* No. of Cranks *Three*  
 Dia. of Cylinders *16" - 26" - 42"* Length of Stroke *27"* Revs. per minute *110* Dia. of Screw shaft *as per rule 8.65* Material of *steel* screw shaft *as fitted 8 1/4*  
 Is 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 tight in 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 part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *no* If two liners are fitted, is the shaft lapped or protected between the liners *no* Length of stern bush *36"*  
 Dia. of Tunnel shaft *as per rule 7.75* Dia. of Crank shaft journals *as per rule 8.13* Dia. of Crank pin *8 1/2"* Size of Crank webs *5 1/2" x 5 1/2"* Dia. of thrust shaft under collars *8 1/2"* Dia. of screw *10.6* Pitch of Screw *11:0* No. of Blades *4* State whether moveable *no* Total surface *14.16 sq ft*  
 No. of Feed pumps *Two* Diameter of ditto *5"* Stroke *13 1/2"* Can one be overhauled while the other is at work *yes*  
 No. of Bilge pumps *Two* Diameter of ditto *5"* Stroke *13 1/2"* Can one be overhauled while the other is at work *yes*  
 No. of Donkey Engines *Two* Sizes of Pumps *4 1/2" x 6" - 7" x 8"* No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room *Two 2 1/2"* In Holds, &c. *Two 2"*

No. of Bilge Injections *Five* sizes *5"* Connected to condenser, or to circulating pump *Four* Is a separate Donkey Suction fitted in Engine room & size *Two 2 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 *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 *no* How are they protected *no*  
 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*  
 Is the Screw Shaft Tunnel watertight *yes* Is it fitted with a watertight door *yes* worked from *no*

**BOILERS, &c.**—(Letter for record *S*) Manufacturers of Steel *As per report attached hereto*  
 Total Heating Surface of Boilers *1960 sq ft* Is Forced Draft fitted *no* No. and Description of Boilers *Two Single End*  
 Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs* Date of test *7/9/17* No. of Certificate *1305*  
 Can each boiler be worked separately *no* Area of fire grate in each boiler *60.9 sq ft* No. and Description of Safety Valves to each boiler *Two Spring* Area of each valve *5.94 sq in* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear *yes*  
 Smallest distance between boilers or uptakes and bunkers or woodwork *22"* Mean dia. of boilers *no* Length *no* Material of shell plates *no*  
 Thickness *no* Range of tensile strength *no* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *no*  
 long. seams *no* Diameter of rivet holes in long. seams *no* Pitch of rivets *no* Lap of plates or width of butt straps *no*  
 Per centages of strength of longitudinal joint *no* Working pressure of shell by rules *no* Size of manhole in shell *no*  
 Size of compensating ring *no* No. and Description of Furnaces in each boiler *no* Material *no* Outside diameter *no*  
 Length of plain part *no* Thickness of plates *no* Description of longitudinal joint *no* No. of strengthening rings *no*  
 Working pressure of furnace by the rules *no* Combustion chamber plates: Material *no* Thickness: Sides *no* Back *no* Top *no* Bottom *no*  
 Pitch of stays to ditto: Sides *no* Back *no* Top *no* If stays are fitted with nuts or riveted heads *no* Working pressure by rules *no*  
 Material of stays *no* Area at smallest part *no* Area supported by each stay *no* Working pressure by rules *no* End plates in steam space: *no*  
 Material *no* Thickness *no* Pitch of stays *no* How are stays secured *no* Working pressure by rules *no* Material of stays *no*  
 Area at smallest part *no* Area supported by each stay *no* Working pressure by rules *no* Material of Front plates at bottom *no*  
 Thickness *no* Material of Lower back plate *no* Thickness *no* Greatest pitch of stays *no* Working pressure of plate by rules *no*  
 Diameter of tubes *no* Pitch of tubes *no* Material of tube plates *no* Thickness: Front *no* Back *no* Mean pitch of stays *no*  
 Pitch across wide water spaces *no* Working pressures by rules *no* Girders to Chamber tops: Material *no* Depth and thickness of girder at centre *no* Length as per rule *no* Distance apart *no* Number and pitch of stays in each *no*  
 Working pressure by rules *no* Steam dome: description of joint to shell *no* % of strength of joint *no*  
 Diameter *no* Thickness of shell plates *no* Material *no* Description of longitudinal joint *no* Diam. of rivet holes *no*  
 Pitch of rivets *no* Working pressure of shell by rules *no* Crown plates *no* Thickness *no* How stayed *no*

**SUPERHEATER.** Type *no* Date of Approval of Plan *no* Tested by Hydraulic Pressure to *no*  
 Date of Test *no* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *no*  
 Diameter of Safety Valve *no* Pressure to which each is adjusted *no* Is Easing Gear fitted *no*



IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:— *The top end bolts. The bottom end bolts. The main bearing bolts. One set coupling bolts. One set feed pump valves. One set bridge pump valves. Bolts nuts etc.*

The foregoing is a correct description,  
FERGUSON BROTHERS (PORT-GLASGOW), LTD.

*P. Ferguson* DIRECTOR

Manufacturer.

Dates of Survey while building: During progress of work in shops (1916) Feb. 7-14. Mar. 2-8-16-20-23-30. Apr. 3-6-14-18-24-28. May. 3-8-16. June 5-23-30. July 5-12-19. Aug. 8-24. Sep. 12-14-19-21-25-28. Oct. 2-10-11-31. Nov. 2-6-8-10-21-23. During erection on board vessel Dec. 15 (1917). Jan. 9-22-24. Feb. 16-22. Mar. 1-9-20. Apr. 3-20-23. May. 3. June 17-26. July 3-17-18-23-25-30-31. Aug. 6-15-20-22-27-30. Sep. 3-5-13-20-28. Oct. 3-5-9-12-17-23. Total No. of visits 88.

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

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

Dates of Examination of principal parts—Cylinders *28/9/17* Slides *28/9/17* Covers *28/9/17* Pistons *28/9/17* Rods *19/10/17*  
Connecting rods *28/9/17* Crank shaft *19/7/16* Thrust shaft *15/11/17* Tunnel shafts ✓ Screw shaft *28/9/17* Propeller *28/9/17*  
Stern tube *28/9/17* Steam pipes tested as sailing ✓ Engine and boiler seatings *19/10/17* Engines holding down bolts *19/10/17*  
Completion of pumping arrangements *15/11/17* Boilers fixed *15/11/17* Engines tried under steam *12/12/17*  
Completion of fitting sea connections *28/9/17* Stern tube *28/9/17* Screw shaft and propeller *28/9/17*  
Main boiler safety valves adjusted *7/12/17* Thickness of adjusting washers *2 7/16 - 5 5/16*.

Material of Crank shaft *S. Iron* Identification Mark on Do. *195* Material of Thrust shaft *S. Iron* Identification Mark on Do. *195*  
Material of Tunnel shafts *Iron* Identification Marks on Do. ✓ Material of Screw shafts *S. Iron* Identification Marks on Do. *195*

Material of Steam Pipes *Copper* ✓ Test pressure *160 lb.*  
Is an installation fitted for burning oil fuel *Yes* ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case *Yes* ✓ If so, state name of vessel *'Andagard' SA 117109.*

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

*The machinery and boilers of this steamer have been constructed under special survey and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the notification + L.M.C. 12-17 in the Register Book.*

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 12.17.

*J.W.D.*  
*1/1/18*

*James James*  
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 2 : 0 :  
Special ... £ 17 : 2 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, *15<sup>th</sup> Dec., 1917.*  
When received, *22-1-1918*

Committee's Minute GLASGOW 27 DEC. 1917

Assigned + L.M.C. 12, 17

MACHINERY CERTIFICATE  
WRITTEN, 28



*Greenock*

Certificate (if required) to be sent to  
The Surveyors are requested not to write on or below the space for Committee's Minute.

24-12-17

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