

Rpt. 4.

REPORT ON MACHINERY.

No. 80702

Received at London Office

15 MAR 1918

Date of writing Report *Mar. 13th 1918* when handed in at Local Office *15 MAR 1918* Port of *London*
No. in Survey held at *London* Date, First Survey *22nd Oct. 1917* Last Survey *March 9th 1918*
Reg. Book. on the *Trawler "Morgan Jones"* Tons } Gross
Master *Stallinson* Built at *Swansea* By whom built *Walter & Co. Swansea* When built *1918*
Engines made at *Swansea* By whom made *Walter & Co. Swansea* when made *1918*
Boilers made at *Swansea* By whom made *Walter & Co. Swansea* when made *1918*
Registered Horse Power Owners *The Ministry of Shipping* Port belonging to
Nom. Horse Power as per Section 28 *86* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *No*

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*
Dia. of Cylinders *12 $\frac{1}{2}$ x 21 $\frac{1}{2}$ x 35* Length of Stroke *26* Revs. per minute *103* Dia. of Screw shaft *7 $\frac{1}{2}$* Material of screw shaft *Steel*
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
the propeller boss *Yes* If the liner is in more than one length are the joints burned *Yes* 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 *Yes* If two
liners are fitted, is the shaft lapped or protected between the liners *Yes* Length of stern bush *34"*
Dia. of Tunnel shaft *7 $\frac{1}{2}$* Dia. of Crank shaft journals *6 $\frac{1}{2}$* Dia. of Crank pin *7 $\frac{1}{2}$* Size of Crank web *10 $\frac{1}{2}$ x 4 $\frac{1}{2}$* Dia. of thrust shaft under
collars *7 $\frac{1}{2}$* Dia. of screw *9 $\frac{1}{2}$* Pitch of Screw *11 $\frac{1}{2}$* No. of Blades *4* State whether moveable *No* Total surface *35 $\frac{1}{2}$ sq ft*
No. of Feed pumps *2* Diameter of ditto *2 $\frac{1}{2}$* Stroke *12"* Can one be overhauled while the other is at work *Yes*
No. of Bilge pumps *2* Diameter of ditto *2 $\frac{1}{2}$* Stroke *12"* Can one be overhauled while the other is at work *Yes*
No. of Donkey Engines *2* Sizes of Pumps *6 x 3 $\frac{1}{2}$ x 6 x 4 x 6* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *2- 2" dia. Bilge ejector* In Holds, &c. *3- 2"*

No. of Bilge Injections *1* sizes *3"* Connected to *condenser* or to circulating pump *Yes* Is 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 *Yes*
Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *Yes*
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 *Yes* How are they protected *Yes*
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 *Yes*

OILERS, &c.—(Letter for record *5*) Manufacturers of Steel *Boiler under B.C. inspection*
Total Heating Surface of Boilers *1600 sq ft* Is Forced Draft fitted *No* No. and Description of Boilers *One multitubular*
Working Pressure *180 lb sq in* Tested by hydraulic pressure to *360 lb sq in* Date of test *19-9-17* No. of Certificate *BC 2216*
Can each boiler be worked separately *Yes* Area of fire grate in each boiler *50 sq ft* No. and Description of Safety Valves *1*
each boiler *2 Spring loaded* Area of each valve *4 $\frac{1}{2}$ sq in* Pressure to which they are adjusted *183 lb sq in* Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork *1'-6"* Mean dia. of boilers *18 $\frac{1}{2}$* Length *18 $\frac{1}{2}$* Material of shell plates
Thickness *Range of tensile strength* Are the shell plates welded or flanged *Yes* Descrip. of riveting: cir. seams
long. seams *Diameter of rivet holes in long. seams* Pitch of rivets *Lap of plates or width of butt straps*
Per centages of strength of longitudinal joint *Working pressure of shell by rules* Size of manhole in shell
Size of compensating ring *No. and Description of Furnaces in each boiler* Material *Outside diameter*
Length of plain part *Thickness of plates* Description of longitudinal joint *No. of strengthening rings*
Working pressure of furnace by the rules *Combustion chamber plates: Material* Thickness: Sides *Back* Top *Bottom*
Pitch of stays to ditto: Sides *Back* Top *If stays are fitted with nuts or riveted heads* Working pressure by rules *End plates in steam space:*
Material of stays *Area at smallest part* Area supported by each stay *Working pressure by rules* Material of stays
Material *Thickness* Pitch of stays *How are stays secured* Working pressure by rules *Material of Front plates at bottom*
Area at smallest part *Area supported by each stay* Working pressure by rules *Working pressure of plate by rules*
Thickness *Material of Lower back plate* Thickness *Greatest pitch of stays* Working pressure of plate by rules
Diameter of tubes *Pitch of tubes* Material of tube plates *Thickness: Front* Back *Mean pitch of stays*
Pitch across wide water spaces *Working pressures by rules* Girders to Chamber tops: Material *Depth and*
thickness of girder at centre *Length as per rule* Distance apart *Number and pitch of stays in each*
Working pressure by rules *Steam dome: description of joint to shell* % of strength of joint
Diameter *Thickness of shell plates* Material *Description of longitudinal joint* Diam. of rivet holes
Pitch of rivets *Working pressure of shell by rules* Crown plates *Thickness* How stayed
SUPERHEATER. Type *Date of Approval of Plan* Tested by Hydraulic Pressure to *Is Easing Gear fitted*
Date of Test *Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler*
Diameter of Safety Valve *Pressure to which each is adjusted*

014185-014197-0142

IS A DONKEY BOILER FITTED?

20

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: 2 main bearing bolts nuts, 2 top end bolts nuts, 2 bottom end bolts nuts, 1 set of coupling bolts nuts, 2 brass ferrules for Condensers, 1 set of feed pump valves & seats, 1 set of bilge pump valves & seats, 6 piston studs, nuts & copper washers, 1 expansion spanner, 1 set of eye bolts, 1 set of air pump valves, 3 Condenser tubes, 3 escape valve springs, 1 set of spanners

The foregoing is a correct description,

For Main Engines only.

Fraser & Chalmers Co. Ltd. per J. P. Saunders Manufacturer.
Works Glasgow

Dates of Survey while building { During progress of work in shops - - (1917) Oct 22nd 26th 29th Nov 5th 8th 21st 22nd 29th Dec 3rd 4th 10th 13th 15th 17th 20th 22nd 31st
During erection on board vessel - - (1918) Jan 4, 8, 12, 16, 29, Feb 1, 6, 9, 12, 14, 19, 21, 22, 23, 25, 26, 27, March 1, 4, 6, 7, 9.
Total No. of visits 39.
Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller
Stern tube Steam pipes tested Jan 4th Engine and boiler seatings Nov 5th Engines holding down bolts Nov 29th
Completion of pumping arrangements Feb 21st Boilers fixed 9.3.18 Engines tried under steam 9.3.18
Completion of fitting sea connections Jan 29th Stern tube Feb 27th Screw shaft and propeller Feb 26th
Main boiler safety valves adjusted Feb 21st Thickness of adjusting washers 3/8"
Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.
Material of Steam Pipes Copper Test pressure 360 lbs per sq in
Is an installation fitted for burning oil fuel ~ 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 If so, state name of vessel

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

The Engines & Boilers have been fitted on board in accordance with the Society's Rules; they were constructed under the inspection of the British Corporation Surveyors.

The boiler safety valves were adjusted under steam to blow at 183 lbs per sq in.

On the Trial Trip the Low Pressure Engine did not work altogether satisfactorily. The packing rings should be again examined in brief time and the Low Pressure slide valve reset.

It is submitted that this vessel is eligible for THE RECORD. LMC. 3.18. subject to the

C.D. cylinder piston rings being examined before the end of September 1918 & the L.D. slide valve re-set. J.W.D. 9/4/18.

The amount of Entry Fee ... £ : : When applied for, 30. Apr. 1918.
Special (1/4 th. of donkey fee) 6 : 9 : :
Donkey Boiler Fee ... £ : : When received, 8-6-1918 J.W.D.
Travelling Expenses (if any) £ : : :
Committee's Minute
Assigned

J. P. Cornick
Engineer Surveyor to Lloyd's Register of Shipping.

TUE APR. 9 1918.

MACHINERY CERTIFICATE
WRITTEN

LMC 3.18
Subject



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Foundation