

# REPORT ON MACHINERY.

No. 42290

Received at London Office WED. NOV. 15 1922

Date of writing Report *Nov<sup>r</sup> 11<sup>th</sup> 1922* When handed in at Local Office *Nov<sup>r</sup> 11<sup>th</sup> 1922* Port of *GLASGOW*

No. in Survey held at *Troon* Date, First Survey *Jan 28<sup>th</sup> 1921* Last Survey *Nov<sup>r</sup> 1<sup>st</sup> 1922*  
Reg. Book. on the *Twin Screw Ferry. FRANCIS STOREY.* (Number of Visits *34*)

Master \_\_\_\_\_ Built at *Troon* By whom built *Ailsa S.B. Co Ltd.* Tons { Gross *4614*  
Net *147*  
When built *1922.*

Engines made at *Troon* By whom made *Ailsa S.B. Co Ltd* N° *118* when made *1922.*

Boilers made at *Glasgow* By whom made *Dunsmuir & Jackson Ltd* B *144* when made *1922.*

Registered Horse Power \_\_\_\_\_ Owners *Wallesey Corporation* Port belonging to *Liverpool.*

Nom. Horse Power as per Section 28 *184.* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines *Twin Screw 4 Cylinder Triple* No. of Cylinders *8* No. of Cranks *8*

Dia. of Cylinders *15, 2 3/2, 25 3/4, 25 3/4* Length of Stroke *21* Revs. per minute *145* Dia. of Screw shaft *8.08* Material of screw shaft *MS*  
as per rule *8.2* as fitted *8.2*

Is the screw shaft fitted with a continuous liner the whole length of the stern tube *No liners* 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 *-* 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 *-* If two liners are fitted, is the shaft lapped or protected between the liners *Vickers Gland fitted to shafts* Length of stern bush *4'-0"*

Dia. of Tunnel shaft *4.19* Dia. of Crank shaft journals *4.55* Dia. of Crank pin *4 5/8* Size of Crank webs *16" x 5 1/2"* Dia. of thrust shaft under collars *4 5/8* Dia. of screw *4' 6"* Pitch of Screw *11' 3"* No. of Blades *4* State whether moceable *No* Total surface *28 sq.*

No. of Feed pumps \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work *-*

No. of Bilge pumps *2.* Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work *Yes*

No. of Donkey Engines *9.* Sizes of Pumps *See over.* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *One @ 2 1/2" Stokehold 2 @ 2 1/2" 1 @ 2 1/2"* In Holds, &c. *FOR<sup>d</sup> One @ 2"*

No. of Bilge Injections *1* sizes *6"* Connected to condenser, or to circulating pump *pump* Is a separate Donkey Suction fitted in Engine room & size *Yes 2 3/4"*

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 *None*

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 on inner skin.*

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 *Ballast* How are they protected *Wood Casing.*

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 *None* Is it fitted with a watertight door *-* worked from *-*

BOILERS, &c.—(Letter for record *S(C)*) Manufacturers of Steel

Total Heating Surface of Boilers *3498 sq ft* Is Forced Draft fitted *No* No. and Description of Boilers *2 Navy Type*

Working Pressure *200 lbs* Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate *16005*

Can each boiler be worked separately *Yes* Area of fire grate in each boiler \_\_\_\_\_ No. and Description of Safety Valves to each boiler *2 Spring-loaded* Area of each valve *4.06 sq"* Pressure to which they are adjusted *205 lbs* Are they fitted with easing gear *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *3' 3"* Mean dia. of boilers \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates

Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Are the shell plates welded or flanged \_\_\_\_\_ 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

Material of stays \_\_\_\_\_ Area at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates in steam space:

Material \_\_\_\_\_ Thickness \_\_\_\_\_ Pitch of stays \_\_\_\_\_ How are stays secured \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of stays

Area at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of Front plates at bottom

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 \_\_\_\_\_  
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 \_\_\_\_\_ Is Easing Gear fitted \_\_\_\_\_

Is a Report also sent on the Hull of the ship



003349-003356-0205

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *—*

SPARE GEAR. State the articles supplied:— 2 HP top end bolts and nuts 2 HP bottom end bolts & nuts 2 LP top end and two LP bottom end bolts and nuts. 2 main bearing bolts A quantity of assorted bolts and iron of various sizes 1 set of feed and bilge pump valves.

The foregoing is a correct description,  
FOR AILS SHIPBUILDING CO., LIMITED.

*McNaughton*  
ENGINEER-MANAGER

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1921 Jan 28 Feb 2 11 16 22 Mar 1 May 13 Nov 9 25 Dec 6 9 13 1922 Jan 31 Feb 17 21 27 Mar 6 7 24 May 23 Jun 1 7 26 Jul 7 11  
{ During erection on board vessel --- } Aug 11 24 25 Sep 18 Oct 6 17 26 31 Nov 1  
Total No. of visits 34.

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

" " " donkey " " " *—*

Dates of Examination of principal parts—Cylinders 25-11-21 Slides 25-11-21 Covers 25-11-21 Pistons 25-11-21 Rods 6-3-22

Connecting rods 6-3-22 Crank shaft 13-12-21 Thrust shaft 14-2-22 Tunnel shafts 14-2-22 Screw shaft 14-2-22 Propeller 9-12-21

Stern tube 6-3-22 Steam pipes tested 11-8-22 Engine and boiler seatings 23-5-22 Engines holding down bolts 11-4-22

Completion of pumping arrangements 26-10-22 Boilers fixed 7-4-22 Engines tried under steam 1-11-22

Completion of fitting sea connections 4-3-22 Stern tube 4-3-22 Screw shaft and propeller 23-5-22

Main boiler safety valves adjusted 26-10-22 Thickness of adjusting washers PBFV <sup>15</sup>/<sub>32</sub> PBAV <sup>7</sup>/<sub>16</sub> SBFV <sup>21</sup>/<sub>64</sub> SBAV <sup>33</sup>/<sub>64</sub>

Material of Crank shaft *S* Identification Mark on Do. *LLOYDS NO 118 DCB 13-22* Material of Thrust shaft *S* Identification Mark on Do. *LLOYDS NO 6834 DCB 14-2-22*

Material of Tunnel shafts *S* Identification Marks on Do. *LLOYDS NO 6834 DCB 14-2-22* Material of Screw shafts *MS* Identification Marks on Do. *LLOYDS NO 6834 DCB 14-2-22*

Material of Steam Pipes *S.D. Copper* Test pressure *400 lbs*

Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Yes*

Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *J. Farley.*

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

DONKEY PUMPS. 2 Feed pumps 4 1/2 x 5 x 10 1 Gen. Service pump 4 1/2 x 5 x 10  
1 Sanitary pump 4 1/2 x 3 x 5 1 Combined Air and Circulating pump 14 x 16 x 15. 1 Pulsometer. 2 oil fuel pumps 3 x 4 1/2 x 6. 1 Oil fuel transfer pump. 4 x 3 x 6

The engines have been constructed under Special Survey in accordance with the Rules of the Society. The workmanship and materials are of good quality. The engines and boilers have been securely fitted on board and tried under steam with satisfactory results.

It is submitted that this vessel is eligible for a record of LMC 11-22 in the Register Book, and to have record of Fitted for oil fuel F.P. above 150°F. 11-22.

*It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11.22. O.G.*

*"Fitted for Oil Fuel" 11.22. F.P. above 150°F.*

The amount of Entry Fee ... £ 3 : 0  
Special ... £ 28 : 1  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 4 : 10

When applied for, 14/10/22

When received, 17/11/22

*David C Barr*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 14 NOV 1922*

Assigned *+ LMC 11.22.*

*Fitted for oil fuel 11.22 F.P. above 150°F.*



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*Glasgow*

*Certificate (if required) to be sent to*

*The Surveyors are requested not to write on or below the space for Committee's Minute.*

*Is a Report also sent on the Hull of the Ship?*