

REPORT ON MACHINERY.

No. 40715.

Received at Local Office

DEC. 29 1920

Date of writing Report Dec. 23rd 1920 When handed in at Local Office Dec. 23rd 1920 Port of GLASGOW
 No. in Survey held at Ayr & Troon Date, First Survey 23. 2. 20 Last Survey Dec. 16th 1920
 Reg. Book. on the Machinery of S.S. CLARA MONKS. (Number of Visits 33) Tons { Gross 577
 Master Ayr Built at Ayr By whom built Ailsa S.B. Coy Ltd (345) When built 1920
 Engines made at Troon By whom made Ailsa S.B. Coy Ltd. (110) when made 1920
 Boilers made at Glasgow By whom made Dunsmuir & Jackson (B.135) when made 1920
 Registered Horse Power 103 Owners Jas. H. Monks (Preston) Ltd Port belonging to Liverpool
 Nom. Horse Power as per Section 28 103 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 14" 23" 34" Length of Stroke 30 Revs. per minute 116 Dia. of Screw shaft 8.25" Material of screw shaft Iron
 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 — 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 — Length of stern bush 33 1/2"
 Dia. of Tunnel shaft 4.39" Dia. of Crank shaft journals 4.46" Dia. of Crank pin 4 7/8" Size of Crank webs 14 5/8" x 5" Dia. of thrust shaft under collars 4 7/8" Dia. of screw 10'-0" Pitch of Screw 11' 6" No. of Blades 4 State whether moveable No Total surface 34 sq
 No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 15" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 15" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 4" x 4" x 5" & 4 3/4" x 3" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 2" bore In Holds, &c. FOR 3 at 2"
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 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 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
 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 & Ballast pipes 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) Manufacturers of Steel
 Total Heating Surface of Boilers 1842 sq Is Forced Draft fitted No No. and Description of Boilers 1 S.E. Multitubular
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 18-10-20 No. of Certificate 15541
 Can each boiler be worked separately — Area of fire grate in each boiler 56.5 sq No. and Description of Safety Valves to each boiler Two Spring-loaded Area of each valve 5.94 sq 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 4'-10" Mean dia. of boilers 14' 3" Length 10' 6" 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 —

003006-003012-0083

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *Two connecting rod top end bolts and nuts
Two bottom end bolts and nuts. Two main bearing bolts. One set of coupling
bolts. One set feed and Bilge pump valves. A quantity of assorted bolts and
nuts and Iron of various sizes.*

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

J M Moughtin
ENGINEER MANAGER. Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1920. Feb 23. 27. Mar 15. 19. 23. 26. 30. Apr 1. May 4. 18. 20. 23. June 2. 10. 15. 22. July 5. 12. 28.*
{ During erection on board vessel -- } *Sept 9. 14. 22. Oct 5. Nov 8. 9. 23. 26. 30. Dec 8. 9. 10. 16.*
Total No. of visits *33.*

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

" " " donkey " " " " "

Dates of Examination of principal parts—Cylinders *28-4-20* Slides *5-10-20* Covers *5-4-20* Pistons *10-6-20* Rods *9-9-20*
Connecting rods *9-9-20* Crank shaft *9-9-20* Thrust shaft *24-9-20* Tunnel shafts — Screw shaft *9-9-20* Propeller *9-9-20*
Stern tube *9-9-20* Steam pipes tested *3-12-20* Engine and boiler seatings *5-10-20* Engines holding down bolts *23-11-20*
Completion of pumping arrangements *8-12-20* Boilers fixed *26-11-20* Engines tried under steam *16-12-20*
Completion of fitting sea connections *5-10-20* Stern tube *5-10-20* Screw shaft and propeller *5-10-20*
Main boiler safety valves adjusted *10-12-20* Thickness of adjusting washers *SV $\frac{5}{16}$ PV $\frac{5}{16}$*

Material of Crank shaft *Steel* Identification Mark on Do. *3404 DCB 9-9-20* Material of Thrust shaft *Steel* Identification Mark on Do. *213 JH 24-9-20*

Material of Tunnel shafts *None* Identification Marks on Do. — Material of Screw shafts *Iron* Identification Marks on Do. *3404 DCB 9-9-20*

Material of Steam Pipes *S. D. Copper* Test pressure *360 lbs*

Is an installation fitted for burning oil fuel *No* 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 have been constructed*)

*under Special Survey in accordance with the Rules of the Society
The workmanship and materials are of good quality*

*They have been securely fitted on board the vessel and tried under steam
with satisfactory results*

*It is submitted that this vessel is eligible for a record of LMC 12-20
in the Register Book.*

*It is submitted that
this vessel is eligible for
TEN RECORD. + LMC. 12 20.*

Roll

29/12/20

GRK

The amount of Entry Fee ... £ *2* : *0* :
Special ... £ *9* : *4* :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ *3* : *10* :
When applied for, *23/1/20.*
When received, *27/12/1920. J.M.M.*

Committee's Minute *Glasgow* *28 DEC 1920*

Assigned *+ LMC 12,20*

MACHINERY CERT
WRITTEN
29.12.20



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Foundation