

REPORT ON MACHINERY.

Received at Office

DEC. 29 1920

Date of writing Report Dec^r 23rd 1920 When handed in at Local Office Dec^r 23rd 1920 Port of GLASGOW.

No. in Survey held at Ayr & Troon. Date, First Survey 23. 2. 20. Last Survey Dec^r 16th 1920.
 Reg. Book. on the Machinery of S.S. CLARA MONKS. (Number of Visits 33) Tons ^{Gross} 577 _{Net} 232

Master Built at Ayr By whom built Ailsa S.B. Coy Ltd (375) 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 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 ^{as per rule} 8.25 _{as fitted} 8.5 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 ^{as per rule} 4.39 _{as fitted} — Dia. of Crank shaft journals ^{as per rule} 4.46 _{as fitted} 4.4 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 8" & 4 1/4" 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 13541

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 195 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4'-10" ^{INT} 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:

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 ^{rivets} _{plate} 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 ^{top} _{bottom} Thickness of plates ^{crown} _{bottom} 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

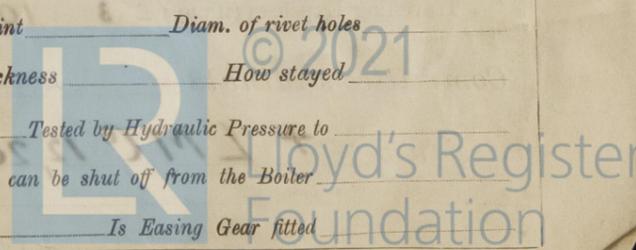
SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

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

If not, state whether, and when, one will be sent

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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. McNaughton
ENGINEER MANAGER. Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1920. July 23-27. Jan 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 2-8. Sept 14-22. Oct 5. Nov 8-9-23-26-30. Dec 8-10-16.
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
J. Barr

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

J. Barr & D. C. Barr
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Glasgow 28 DEC 1920
Assigned + LMC 12,20

MACHINERY CERT
WRITTEN
29.12.20



Glasgow

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