

REPORT ON MACHINERY

No. 75011

Received at London Office

TUE. 6 DEC. 1921

Date of writing Report 31 October 1921 When handed in at Local Office

31/10/1921 Port of NEWCASTLE-ON-TYNE

No. in Survey held at North Shields.

Date, First Survey 17 Sept. 1920 Last Survey 31 October 1921

Reg. Book.

on the S.S. "Moonside" (R. B. Harrison Ltd No 2)

(Number of Visits 21)

Master Built at Newcastle By whom built R. B. Harrison Ltd Tons Gross Net
Engines made at North Shields By whom made Shields Eng. & D. D. Co Ltd when made 1922
Boilers made at Newcastle By whom made Palmers Ship & Iron Co Ltd when made 1920.
Registered Horse Power Owners Thomas Rose Port belonging to Sunderland.

Nom. Horse Power as per Section 28 58. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Inverted compound. No. of Cylinders 2 No. of Cranks 2
Dia. of Cylinders 15" x 32" Length of Stroke 22" Revs. per minute Dia. of Screw shaft as per rule 7.35" Material of screw shaft Iron
Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner. 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 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 2'-8"
Dia. of Tunnel shaft as per rule 6.71" Dia. of Crank shaft journals as per rule 6.78" Dia. of Crank pin 6.78" Size of Crank webs 12 1/2" x 4 1/4" Dia. of thrust shaft under collars 6 7/8" Dia. of screw 8'-3" Pitch of Screw 9'-6" No. of Blades 4 State whether moveable No Total surface 26.5 sq ft
No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 10 1/2" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 10 1/2" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 1 Sizes of Pumps 5 1/4" x 3 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 3 - 2" In Holds, &c. 2 (P + S) - 2"

No. of Bilge Injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump Pump. Is a separate Donkey Suction fitted in Engine room & size Yes 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 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 None. 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.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel See Newcastle Report No 73822.

Total Heating Surface of Boilers 1086 Is Forced Draft fitted No No. and Description of Boilers 1 S.B.
Working Pressure 140 lbs. Tested by hydraulic pressure to Date of test No. of Certificate
Can each boiler be worked separately Area of fire grate in each boiler 34 sq ft No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 3.97 sq ft Pressure to which they are adjusted 145 lbs. Are they fitted with easing gear Yes.
Smallest distance between boilers or uptakes and bunkers or woodwork 1'-1" 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 rivets 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 Thickness of plates crown 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 DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:— 2 main bearing belts + nuts. — 2 top end & 2 bottom end belts + nuts. — 1 set coupling belts. — 1 set bridge valves. — 1 set feed pump valves + seats. — 6 piston belts + nuts. A number of belts + nuts of assorted sizes. — A quantity of bar iron of various sizes. — A number of condenser ferrules. —

The foregoing is a correct description,

Wm. G. Curran

ENGINE WORKS
MANAGER

1920
Dates of Survey while building { During progress of work in shops --
During erection on board vessel --
Total No. of visits 21
1921
Is the approved plan of main boiler forwarded herewith *yes*
" " " donkey " " "
Dates of Examination of principal parts—Cylinders 20.10.20 Slides 8.12.20 Covers 8.12.20 Pistons 2.11.20 Rods 2.11.20
Connecting rods 2.11.20 Crank shaft 21.10.20 Thrust shaft 21.11.20 Tunnel shafts ✓ Screw shaft 21.10.20 Propeller 9.11.20
Stern tube 9.11.20 Steam pipes tested 26.10.21 Engine and boiler seatings 21.10.21 Engines holding down bolts 26.10.21
Completion of pumping arrangements 28.10.21 Boilers fixed 21.10.21 Engines tried under steam 28.10.21
Completion of fitting sea connections 18.10.21 Stern tube 18.10.21 Screw shaft and propeller 18.10.21
Main boiler safety valves adjusted 28.10.21 Thickness of adjusting washers Port 5/16" Starboard 5/16"
Material of Crank shaft *W. Iron* Identification Mark on Do. *5494N* Material of Thrust shaft *Steel* Identification Mark on Do. *5496N*
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *5496N*
Material of Steam Pipes *Copper (50)* Test pressure *280 lb/sq in*
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 *yes* If so, state name of vessel *"Fernside"*
General Remarks (State quality of workmanship, opinions as to class, &c.)

The engines and boilers of this vessel have been built under special survey, and the material and workmanship is sound and good.

They have been efficiently installed on board, and tried under steam, and found to work satisfactorily.

The machinery of this vessel is in good order and safe working condition and eligible in our opinion to have the notation + Lmc 10-21 placed in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + L. M. C. - 10.21.

The amount of Entry Fee ... £ 2 - 0 - 0 When applied for.
Special ... £ 14 - 10 - 0 24/11/21.
Donkey Boiler Fee ... £ 3 - 12 - 0
Travelling Expenses (if any) £ 10 - 18 - 0 When received.
22.12.21

Committee's Minute

Assigned

+ Lmc 10.21

FRI. DEC. 9 1921

CERTIFICATE WRITTEN

J. McNeillan
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation