

Rpt. 4.

REPORT ON MACHINERY.

No. 5411
-2 JUN 1926

Received at London Office

Date of writing Report *26th May 1926* When handed in at Local Office *28th May 1926* Port of *GLASGOW*
No. in Survey held at *Paisley* Date, First Survey *12th December 1925* Last Survey *24th May 1926*
Reg. Book. *9865* on the *STEEL TWIN SC. SR. "LOCH LONG"* (Number of Visits *3*) Tons { Gross *145*
Net *47*

Master *✓* Built at *Paisley* By whom built *Messrs. Bow MacLellan & Co. Ltd. (N° 3918-9)* When built *1926-5*
Engines made at *Paisley* By whom made *Messrs. Bow MacLellan & Co. Ltd. (N° 3918-9)* when made *1926-5*
Boilers made at *do* By whom made *do* (N° 1158) when made *1926-5*
Registered Horse Power *62* Owners *The Admiralty* Port belonging to *None*
Nom. Horse Power as per Section 28 *62* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *Twin Compound Surface Condensing* No. of Cylinders *4* No. of Cranks *4*
Dia. of Cylinders *11" x 23" (twin)* Length of Stroke *14"* Revs. per minute *190* Dia. of Screw shaft *4 1/4"* Material of *steel*
Is the screw shaft fitted with a continuous liner the whole length of the stern tube *yes: no oil glands* 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 *1' 7"*
Dia. of Tunnel shaft *as per rule 4 1/8"* Dia. of Crank shaft journals *as per rule 4 3/4"* Dia. of Crank pin *4 3/4"* Size of Crank webs *3 1/2" x 6 1/2"* Dia. of thrust shaft under
collars *4 1/2"* Dia. of screw *5' 6"* Pitch of Screw *5' 6"* No. of Blades *4* State whether moveable *no* Total surface *11.9 sq ft (each propeller)*
No. of Feed pumps *2 independent* Diameter of ditto *4 1/2"* Stroke *10"* Can one be overhauled while the other is at work *yes*
No. of Bilge pumps *2* Diameter of ditto *2"* Stroke *7"* Can one be overhauled while the other is at work *yes*
No. of Donkey Engines *1* Sizes of Pumps *6" x 4 1/4" x 6"* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *2 @ 2"* In Holds, &c. *1 ft @ 2": 1 fwd. @ 2"*

No. of Bilge Injections *1* sizes *4"* 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 *✓*
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 *✓*
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 *no* worked from *✓*

BOILERS, &c.—(Letter for record *S*) Manufacturers of Steel *Plates: N. Beardmore & Co. Bars: Charlesworth Steel Co.*
Total Heating Surface of Boilers *1444 sq ft* Is Forced Draft fitted *no* No. and Description of Boilers *1—Cylindrical, single ended, return tube*
Working Pressure *120 lbs./sq in* Tested by hydraulic pressure to *230 lbs./sq in* Date of test *8.3.26* No. of Certificate *17064*
Can each boiler be worked separately *✓* Area of fire grate in each boiler *40 sq ft* No. and Description of Safety Valves to
each boiler *2 back but High Lift* Area of each valve *4.91 sq in* Pressure to which they are adjusted *120 lbs./sq in* Are they fitted with easing gear *yes*
Smallest distance between boilers or uptakes and bunkers or woodwork *well clear* Mean dia. of boilers *11' 6"* Length *10' 6"* Material of shell plates *steel*
Thickness *2 1/32"* Range of tensile strength *28-32 tons* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *D.R. Lap*
long. seams *T.R.D.B.S.* Diameter of rivet holes in long. seams *23/32"* Pitch of rivets *5 1/4"* Lap of plates or width of butt straps *11 1/4"*
Per centages of strength of longitudinal joint *91.0* Working pressure of shell by rules *120 lbs./sq in* Size of manhole in shell *16" x 12"*
Size of compensating ring *6 1/4" x 2 1/32"* No. and Description of Furnaces in each boiler *2—Corrugated (Double)* Material *steel* Outside diameter *3' 5 3/4"*
Length of plain part *top* Thickness of plates *crown 3/8"* Description of longitudinal joint *weld* No. of strengthening rings *✓*
Working pressure of furnace by the rules *126 lbs./sq in* Combustion chamber plates: Material *steel* Thickness: Sides *17/32"* Back *17/32"* Top *17/32"* Bottom *5/8"*
Pitch of stays to ditto: Sides *10 1/8" x 7 1/2"* Back *9" x 8 3/4"* Top *10" x 7 1/2"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *120 lbs./sq in*
Material of stays *steel* Area at smallest part *1 7/8" x 1 1/8"* Area supported by each stay *79.98 sq in* Working pressure by rules *128 lbs./sq in* End plates in steam space:
Material *steel* Thickness *2 5/32"* Pitch of stays *1' 3" x 1' 3"* How are stays secured *double nuts* Working pressure by rules *122 lbs./sq in* Material of stays *steel*
Area at smallest part *2 1/8"* Area supported by each stay *225 sq in* Working pressure by rules *134 lbs./sq in* Material of Front plates at bottom *steel*
Thickness *2 5/32"* Material of Lower back plate *steel* Thickness *2 5/32"* Greatest pitch of stays *18" P.C.D.* Working pressure of plate by rules *178 lbs./sq in*
Diameter of tubes *3"* Pitch of tubes *4" x 4"* Material of tube plates *steel* Thickness: Front *2 5/32"* Back *5/8"* Mean pitch of stays *10"*
Pitch across wide water spaces *13" x 8"* Working pressures by rules *128 lbs./sq in* Girders to Chamber tops: Material *steel* Depth and
thickness of girder at centre *2 @ 7" x 9 1/16"* Length as per rule *2' 7 27/32"* Distance apart *7 1/2"* Number and pitch of stays in each *2 @ 10"*
Working pressure by rules *125 lbs./sq in* Steam dome: description of joint to shell *none* % 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 *None* 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 *✓*

W1232-0004

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

2 - Connecting rod top-end bolts & nuts;
2 - Connecting rod bottom-end bolts & nuts;
2 - Main bearing bolts & nuts;
1 set - Coupling bolts;
1 set - Air, feed & bilge pump valves;
1 set - H.P. & L.P. Ramabottom piston rings;
A quantity assorted bolts & nuts; Iron of various sizes; 2 propellers etc.

The foregoing is a correct description,

BOW, M'LACHLAN & CO. LTD.

J. Macmillan

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1925 Dec 14 21 28 30 (1926) Jan 4 7 12 14 20 23 28 Feb 1 8 11 16 23 25 Mar 2 4 8 15 16 18 23 26 30
During erection on board vessel - - Apr 1 4 8 13 16 27 May 5 24
Total No. of visits 34

Is the approved plan of main boiler forwarded herewith

yes

" " " donkey " " "

none

Dates of Examination of principal parts - Cylinders { 25-1-26 Slides 25-1-26 Covers 25-1-26 Pistons 23-2-26 Rods 23-2-26

Connecting rods 23-2-26 Crank shafts 2-3-26 Thrust shafts 2-3-26 Tunnel shafts none Screw shafts 16-3-26 Propellers 16-3-26

Stern tubes 16-3-26 Steam pipes tested 1-4-26 Engine and boiler seatings 8-3-26 Engines holding down bolts { 23-3-26 26-3-26 P.

Completion of pumping arrangements 8-4-26 Boilers fixed 7-4-26 Engines tried under steam 8-4-26

Completion of fitting sea connections 16-3-26 Stern tube { 16-3-26 18-3-26 Screw shafts and propellers 18-3-26

Main boiler safety valves adjusted 7-4-26 Thickness of adjusting washers 7/16" P. 1/32" S.

Material of Crank shafts steel Identification Mark on Do. Lloyd's No. 1397 J.D.B. 2-3-26

Material of Thrust shafts steel Identification Mark on Do. Lloyd's No. 1397 J.D.B. 2-3-26

Material of Tunnel shafts none Identification Marks on Do. Lloyd's No. 1397 J.D.B. 15-3-26

Material of Screw shafts steel Identification Marks on Do. Lloyd's No. 1397 J.D.B. 15-3-26

Material of Steam Pipes solid drawn copper Test pressure 240 lbs. / 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 no If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. These engines & the Boilers have been

built under special survey in accordance with the Rules & the

approved plans: the material & workmanship are good: they

have been properly fitted on board & tried under steam

with satisfactory result.

This Machinery is eligible, in my opinion, to be classed

in the Register Book with notation: L.M.C. - 5, 26; T.S.

- C.L. - P. & S.

It is submitted that this vessel is eligible for THE RECORD. + LMC 5. 26. CL.

J.D. Boyle 3/6/26

The amount of Entry Fee ... £ 2 : - : When applied for, 31/5/26

Special ... £ 15 : 10/ : When received, 31/5/26

Donkey Boiler Fee ... £ - : - : Travelling Expenses (if any) £ - : - :

Committee's Minute GLASGOW 1 - JUN 1926

Assigned + LMC 526

CERTIFICATE JUNE 1926 2-6-26

© 2021 Lloyd's Register Foundation