

REPORT ON MACHINERY.

No. 5411
-2 JUN 1926

Received at London Office

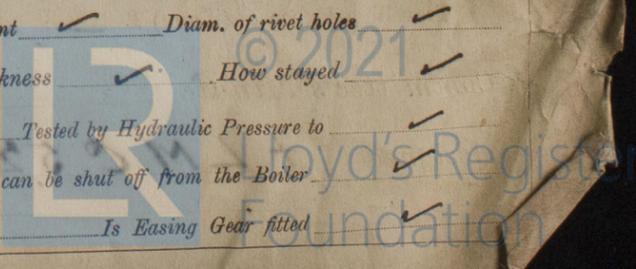
Date of writing Report *26th May 1926* When handed in at Local Office *28th May 1926* Port of *GLASGOW*
 No. in Survey held at *Paisley* Date, First Survey *12th December 1925* Last Survey *24th May 1926*
 Reg. Book. *9865* on the *STEEL TWIN SC. SR. "LOCH LONG"* (Number of Visits *3*)
 Master *✓* Built at *Paisley* By whom built *Messrs. Bow, MacLellan & Co. Ltd. (N° 457)* 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 _____ 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" & 23" (twin)* Length of Stroke *14"* Revs. per minute *190* Dia. of Screw shaft as per rule *4.64"* Material of screw shaft *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" 18"* Dia. of Crank shaft journals as per rule *4" 39"* 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 ft² (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: Charles & Co. Steel Co.*
 Total Heating Surface of Boilers *1444 ft²* Is Forced Draft fitted *no* No. and Description of Boilers *1 - Cylindrical, single ended, return tube*
 Working Pressure *120 lbs./in²* Tested by hydraulic pressure to *230 lbs./in²* Date of test *8.3.26* No. of Certificate *17064*
 Can each boiler be worked separately *✓* Area of fire grate in each boiler *40 ft²* No. and Description of Safety Valves to
 each boiler *2 back-burn High Lift* Area of each valve *4.91 in²* Pressure to which they are adjusted *120 lbs./in²* 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 *21/32"* 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 (rivets *91.0* plate *86.5* comb. *91.2*) Working pressure of shell by rules *120 lbs./in²* 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 *bottom* *3/8"* Description of longitudinal joint *weld* No. of strengthening rings *✓*
 Working pressure of furnace by the rules *120 lbs./in²* 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./in²*
 Material of stays *steel* Area at smallest part *1 7/8" x 1 1/8"* Area supported by each stay *79.98 in²* Working pressure by rules *128 lbs./in²* End plates in steam space:
 Material *steel* Thickness *25/32"* Pitch of stays *1' 3" x 1' 3"* How are stays secured *Double nuts* Working pressure by rules *122 lbs./in²* Material of stays *steel*
 Area at smallest part *2 1/8"* Area supported by each stay *225 in²* Working pressure by rules *134 lbs./in²* Material of Front plates at bottom *steel*
 Thickness *25/32"* Material of Lower back plate *steel* Thickness *25/32"* Greatest pitch of stays *18" P.C.D.* Working pressure of plate by rules *178 lbs./in²*
 Diameter of tubes *3"* Pitch of tubes *4" x 4"* Material of tube plates *steel* Thickness: Front *25/32"* Back *5/8"* Mean pitch of stays *10"*
 Pitch across wide water spaces *13" x 8"* Working pressures by rules *128 lbs./in²* 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 25/32"* Distance apart *7 1/2"* Number and pitch of stays in each *2 @ 10"*
 Working pressure by rules *125 lbs./in²* 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 *✓*



4000-2000
W1232-0001

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,

How, M'Laughlin & Co. Ltd.

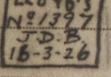
J. Macmillan

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1925 Dec 14 21 29 30 (1926) Jan 4 9 12 14 20 25 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.  Material of Thrust shafts *steel* Identification Mark on Do. 
 Material of Tunnel shafts *none* Identification Marks on Do. ✓ Material of Screw shafts *steel* Identification Marks on Do. 
 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 : - :
 Special ... £ 15 : 10/ :
 Donkey Boiler Fee ... £ - : - :
 Travelling Expenses (if any) £ - : - :

When applied for, 31/5/26

When received, 3/6/26

J. D. Boyle
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1 - JUN 1926

Assigned + LMC 526



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CERTIFICATE JUN 1926 2-6-26

GLASGOW

Certificate (if required) to be sent to

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