

Rpt. 4.

REPORT ON MACHINERY.

No. 45026.

-1 OCT 1925

Received at London Office

Date of writing Report 24th Sept. 1925 When handed in at Local Office 25th Sept. 1925 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 26.5.25 Last Survey 23rd Sept. 1925
 Reg. Book. 39966 on the S.S. MEREL (Number of Visits 45) Gross 1088 Tons Net 467
 Master ✓ Built at Inver By whom built Ayrshire Dockyard Ltd. When built 1925-9
 Engines made at Paisley By whom made Munitions Works Ltd. when made 1925
 Boilers made at Paisley By whom made Do. (N^o 1149050) when made 1925
 Registered Horse Power 298 Owners General Steam Nav. Co. Ltd. Port belonging to London
 Nom. Horse Power as per Section 28 298 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

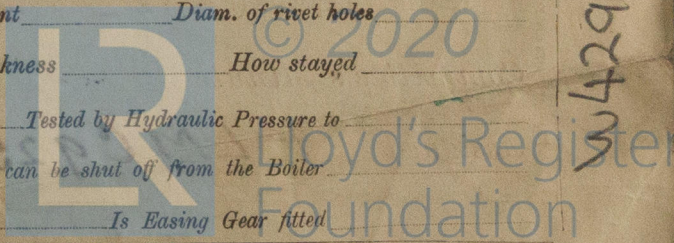
ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 22" 35" 57" Length of Stroke 39" Revs. per minute 87 Dia. of Screw shaft as per rule 12 1/4" Material of screw shaft steel
 Is the screw shaft fitted with a continuous liner the whole length of 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 4'-2"
 Dia. of Tunnel shaft as per rule 11 1/8" Dia. of Crank shaft journals as per rule 11 1/8" Dia. of Crank pin 11 7/8" Size of Crank webs 22 1/2" x 7 1/4" Dia. of thrust shaft under collars 11 7/8" Dia. of screw 13-0" Pitch of Screw 16-9" No. of Blades 4 State whether moveable no Total surface 62.8 sq ft
 No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 19 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 19 1/2" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 Sizes of Pumps 6" x 6" 7" x 8" 8" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 @ 2 1/4" In Holds, &c. forward 4 @ 2 1/2" aft 3 @ 2 1/2"

No. of Bilge Injections one sizes 7" Connected to condenser, or to circulating pump ✓ Is a separate Donkey Suction fitted in Engine room & size yes 3"
 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 Below
 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 How are they protected Steel Plating
 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 Above Bulkhead Deck

BOILERS, &c.—(Letter for record S) Manufacturers of Steel William Beardmore & Co. Ltd.
 Total Heating Surface of Boilers 5416 sq ft Is Forced Draft fitted no No. and Description of Boilers 2 Cylindrical D.C.
 Working Pressure 200 lbs Tested by hydraulic pressure to 350 lbs Date of test 23.7.25 No. of Certificate 16897
 Can each boiler be worked separately yes Area of fire grate in each boiler 69 sq ft No. and Description of Safety Valves to each boiler Two Direct Spring Area of each valve 9.62 sq in Pressure to which they are adjusted 200 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 8'-0" Mean dia. of boilers 15'-7 1/2" Length 11'-6" Material of shell plates steel
 Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R. L.P. long. seams F.R.D.B.S. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 10" Lap of plates or width of butt straps 1'-9 3/8"
 Per centages of strength of longitudinal joint 89.0 Working pressure of shell by rules 201 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring ✓ No. and Description of Furnaces in each boiler 3 corrugated (Doughty) Material steel Outside diameter 4'-2 1/4"
 Length of plain part top 33 1/2" Thickness of plates bottom 33 1/2" Description of longitudinal joint weld No. of strengthening rings ✓
 Working pressure of furnace by the rules 201 lbs Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 3/16"
 Pitch of stays to ditto: Sides 9" x 9" Back 9 1/2" x 8 1/2" Top 8 1/2" x 9" If stays are fitted with nuts or riveted heads heads at C.C. ends Working pressure by rules 203 lbs
 Material of stays steel Area at smallest part 2.03 Area supported by each stay 81 sq in Working pressure by rules 223 lbs End plates in steam space: Material steel Thickness 1 3/16" Pitch of stays 18" x 17" How are stays secured Double Nut Working pressure by rules 214 lbs Material of stays steel
 Area at smallest part 6.1 Area supported by each stay 306 sq in Working pressure by rules 220 lbs Material of Front plates at bottom steel
 Thickness 1 1/16" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 19" high Working pressure of plate by rules 207 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/4" Material of tube plates steel Thickness: Front 1 1/16" Back 2 1/32" Mean pitch of stays 12 3/4" x 8 1/4"
 Pitch across wide water spaces 14 1/4" x 9 1/2" Working pressures by rules 205 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 10" x 3 1/2" Length as per rule 34.5" Distance apart 8 1/2" Number and pitch of stays in each 3 @ 9"
 Working pressure by rules 209 lbs Steam dome: description of joint to shell same % 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 same 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 ✓

429-0077



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *no*

SPARE GEAR. State the articles supplied:

*2-Connecting rod top end bolts & nuts;
2-Connecting rod bottom end bolts & nuts;
2-Main bearing bolts;
1 set - Coupling bolts;
1 set - Feed & bilge pump valves;
A quantity of assorted bolts & nuts and
Iron of various sizes.*

The foregoing is a correct description,

DOW, McLACHLAN, & CO., Ltd.

John Baseler

Manufacturer.

Dates of Survey while building
During progress of work in shops - - *1925. Mar 26-30. Apr 6-9. 14-16. 23-25. 30. May 6-11. 14-15. 19-22. 26.*
During erection on board vessel - - - *June 3-11. 14-25. 29. July 2-3. 6-7. 9. 15-22. 23-24. 25-31. Aug 10-18. 19-24. 25-31. Sep 3-14. 17-22-23*
Total No. of visits *43*

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

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders *3.6.25* Slides *3.7.25* Covers *3.6.25* Pistons *11.6.25* Rods *3.6.25*

Connecting rods *3.6.25* Crank shaft *3.7.25* Thrust shaft *3.7.25* Tunnel shafts *3.7.25* Screw shaft *3.7.25* Propeller *6.7.25*

Stern tube *15.6.25* Steam pipes tested *25.8.25* Engine and boiler seatings *7-7-25* Engines holding down bolts *25.8.25*

Completion of pumping arrangements *22-9-25* Boilers fixed *25.8.25* Engines tried under steam *23-9-25*

Completion of fitting sea connections *7.7.25* Stern tube *2.7.25* Screw shaft and propeller *9.7.25*

Main boiler safety valves adjusted *8.9.25*

Thickness of adjusting washers *Pat. Bk. 1/2 SR 9/16* *London Bk. 1/2 SR 1/2*

Material of Crank shaft *steel* Identification Mark on Do. *LLOYDS N° 9867 3.7.25 A.D.M.* Material of Thrust shaft *steel* Identification Mark on Do. *LLOYDS N° 9867 3.7.25 A.D.M.*

Material of Tunnel shafts *steel* Identification Marks on Do. *LLOYDS N° 9867 3.7.25 A.D.M.* Material of Screw shafts *iron* Identification Marks on Do. *LLOYDS N° 9867 3.7.25 A.D.M.*

Material of Steam Pipes *Solid drawn steel* Test pressure *600 lb*

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 & 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 and tried under steam with satisfactory results.*

This Machinery is eligible, in our opinion, to be classed in the Register Book with notation: L.M.C. — 9.25. C.L.

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.25. CL.

W.D. 2/10/25

The amount of Entry Fee ... £ 4 : 0 : ✓ When applied for, *30 SEP 1925*

Special ... £ 69 : 14 : ✓

Donkey Boiler Fee ... £ - : - : ✓ When received, *16/11/25*

Travelling Expenses (if any) £ - : - : ✓

Committee's Minute *GLASGOW 30 SEP 1925*

Assigned *+ LMC 9.25*

J.D. Boyle & A.B. Munro
Engineer Surveyor to Lloyd's Register of Shipping.



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CERTIFICATE WRITTEN *1/10/25*