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REPORT ON MACHINERY.

No. 45350

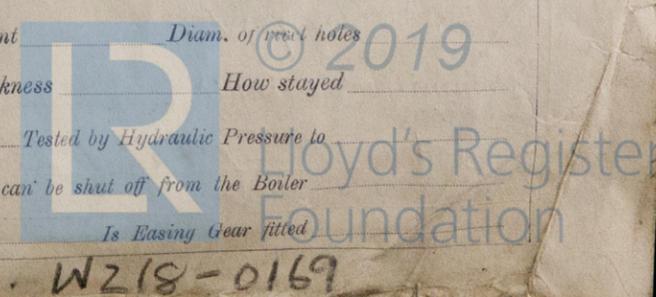
Received at London Office 27 JAN 1926

Date of writing Report 19 When handed in at Local Office 19.1.26 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 6-3-25 Last Survey 16-1-1926
 Reg. Book. on the new steel S/S "MARTHARA". (Number of Visits 37)
 Master Built at Glasgow By whom built D. & W. Henderson & Co. Ld. (No. 709) When built 1926
 Engines made at Glasgow By whom made D. & W. Henderson & Co. Ld. (No. 709) when made 1926
 Boilers made at Glasgow By whom made D. & W. Henderson & Co. Ld. (No. 709) when made 1926
 Registered Horse Power Owners Magdala S/S (MacLay) Port belonging to Glasgow
 Nom. Horse Power as per Section 28 449 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 25"-41"-68" Length of Stroke 51" Revs. per minute 68 Dia. of Screw shaft as per rule 14.42 Material of steel
 as fitted 14 3/4" screw shaft
 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 If two
 liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 4'-11"
 Dia. of Tunnel shaft as per rule 2.90" 13.4" Dia. of Crank shaft journals as per rule 13.61" 13.43" Dia. of Crank pin 13 1/2" Size of Crank webs 25 1/2" x 8 1/2" Dia. of thrust shaft under
 collars 13 5/8" Dia. of screw 17'-6" Pitch of Screw 17'-6" No. of Blades 4 State whether moveable no Total surface 950 sq ft
 No. of Feed pumps (on Engines) Diameter of ditto 5" Stroke 25 1/2" Can one be overhauled while the other is at work yes also 2 Weir's feed
 No. of Bilge pumps 2 Diameter of ditto 5" Stroke 25 1/2" Can one be overhauled while the other is at work yes 18 1/2" x 21"
 No. of Donkey Engines 4 Sizes of Pumps 18 1/2" x 21" 8 1/2" x 8" 7 1/2" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 @ 3 1/2" In Holds, &c. No. 1 hold - 2 @ 3 1/2" No. 2 hold - 2 @ 3 1/2"
 No. 3 hold - 2 @ 3 1/2" No. 4 hold - 1 @ 3 1/2" Tunnel well - 1 @ 3"
 No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump b.p. Is a separate Donkey Suction fitted in Engine room & size yes, 4 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 forward hold suction How are they protected under timber boards
 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 upper deck

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Sulehof Jünngasse - Oberhausen, & Ehrlich & Co. Charleroi Antwerp
 Total Heating Surface of Boilers 6513 sq ft Is Forced Draft fitted yes No. and Description of Boilers Three single ended
 Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 17-8-25 8-9-25 No. of Certificate 16908 16924
 Can each boiler be worked separately yes Area of fire grate in each boiler 50 sq ft No. and Description of Safety Valves to
 each boiler 2 1/2" High lift Area of each valve 4.90" Pressure to which they are adjusted 185 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 14'-3" Length 11'-6" Material of shell plates steel
 Thickness 1 1/4" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.
 long. seams D.B.S. TR Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 5/8" Lap of plates or width of butt straps 18 1/8"
 Per centages of strength of longitudinal joint rivets 93.3 Working pressure of shell by rules 181 Size of manhole in steel 16" x 12" manhole
 plate 85.5 Size of compensating ring flanged 3 3/4" No. and Description of Furnaces in each boiler 3 Weynton Material steel Outside diameter 3'-8 1/4"
 Length of plain part top 33" bottom 64" Description of longitudinal joint welded No. of strengthening rings
 Working pressure of furnace by the rules 181 Combustion chamber plates: Material steel Thickness: Sides 11/16" Back 21/32" Top 11/16" Bottom 7/8"
 Pitch of stays to ditto: Sides 9 1/4" x 9 3/4" Back 9" x 9" Top 9 3/4" x 9 3/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180
 Material of stays steel Area at smallest part 2.030" Area supported by each stay 91.398 sq ft Working pressure by rules 180 180 185 End plates in steam space:
 Material steel Thickness 1 5/32" Pitch of stays 19 3/8" x 17 1/2" How are stays secured W.N. Working pressure by rules 182 Material of stays steel
 Area at smallest part 5.410" Area supported by each stay 317.0" Working pressure by rules 187 Material of Front plates at bottom steel
 Thickness 15/16" Material of Lower back plate steel Thickness 13/16" Greatest pitch of stays 14 1/2" x 9" Working pressure of plate by rules 185
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plates steel Thickness: Front 15/16" Back 3/4" Mean pitch of stays 10.45"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 183 & 183 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 2 @ 8" x 11" Length as per rule 2-6 15/32" Distance apart 9 3/8" Number and pitch of stays in each 2 @ 9 3/4"
 Working pressure by rules 181 Steam dome: description of joint to shell none % of strength of joint

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:— *As per Rules and in addition - 1 thrust shaft (Michell), 1 propeller shaft and one solid cast iron propeller.*

The foregoing is a correct description,

FOR DAVID & WM HENDERSON & CO., LTD.

J. Patel

DIRECTOR. Manufacturer.

Dates of Survey while building: During progress of work in shops - *1925. Mar 6. Apr 2. May 14. 28. June 12. 15. July 2. 7. 31. Aug 5. 17. 20. 28.*
During erection on board vessel - *1925. 3. 8. 9. 14. 25. Oct 6. 8. 12. 30. Nov 9. 12. 16. 18. Dec 8. 11. 15. 16. 19. 21. 23. 24. 29.*
Total No. of visits *37.*

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

Dates of Examination of principal parts—Cylinders *31-7-25* Slides *14-9-25* Covers *3-9-25* Pistons *14-9-25* Rods *6-10-25*
Connecting rods *20-8-25* Crank shaft *20-8-25* Thrust shaft *8-10-25* Tunnel shafts *8-10-25* Screw shaft *8-10-25* Propeller *18-9-25*
Stern tube *12-10-25* Steam pipes tested *12-11-25* Engine and boiler seatings *8-12-25* Engines holding down bolts *24-12-25*
Completion of pumping arrangements *16-1-26* Boilers fixed *21-12-25* Engines tried under steam *16-1-26*
Completion of fitting sea connections *16-11-25* Stern tube *16-11-25* Screw shaft and propeller *16-11-25*
Main boiler safety valves adjusted *29-12-25* Thickness of adjusting washers *Pou. bl. P 16. 5 3/8. bent. both 3/8. steel. both 3/8"*
Material of Crank shaft *I. steel* Identification Mark on Do. *LLOYD'S N° 709 LCD 8-10-25* Material of Thrust shaft *I. steel* Identification Mark on Do. *LLOYD'S N° 12247 LCD 8-10-25*
Material of Tunnel shafts *I. steel* Identification Marks on Do. *LLOYD'S N° 709 LCD 8-10-25* Material of Screw shafts *I. steel* Identification Marks on Do. *LLOYD'S N° 12248 LCD 8-10-25*
Material of Steam Pipes *Solid drawn steel* Test pressure *540 lbs per sq"*
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 *35* 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.)

The materials and workmanship are good. The machinery has been constructed under special survey and is eligible in my opinion for classification and the Record + LMC 1, 26.

The machinery has been properly fitted on board and tried under steam with satisfactory results.

It is submitted that this vessel is eligible for THE RECORD. + LMC 1. 26. FD. CL.

CERTIFICATE WRITTEN 30/1/26

S. Davis
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 :
Special ... £ 92 : 7
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :

Committee's Minute GLASGOW 26 JAN 1926

Assigned + LMC 1, 26
FD. W.M.

Glasgow

26/1/26

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

