

REPORT ON MACHINERY.

No. 45350.

Date of writing Report

19

When handed in at Local Office

19.1.1926 Port of Glasgow

Received at London Office 27 JAN 1926

No. in Survey held at Glasgow

Date, First Survey

6-3-25

Last Survey

16-1-1926

Reg. Book.

(Number of Visits 37)

on the new steel S/S "MARTHARA".

Gross 4999
Net 3101

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 Co. (Magdala) Port belonging to Glasgow

Nom. Horse Power as per Section 28

449

Is Refrigerating Machinery fitted for cargo purposes

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

14.42

Material of 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

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" 12.8"

Dia. of Crank shaft journals

as per rule 13.61" 13.43"

Dia. of Crank pin 13.5"

Size of Crank webs 25.8" x 8.5"

Dia. of thrust shaft under

collars 13.8"

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

Diameter of ditto 5"

Stroke 25.5"

Can one be overhauled while the other is at work yes also 2 Weir feed

No. of Bilge pumps 2

Diameter of ditto 5"

Stroke 25.5"

Can one be overhauled while the other is at work yes

No. of Donkey Engines 4

Sizes of Pumps 18.9" x 21.8" 4.6" x 8.7" 4.5" x 8"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

3 @ 3.5"

In Holds, &c. No. 1 hold - 2 @ 3.5" No. 2 hold - 2 @ 3.5"

No. 3 hold - 2 @ 3.5"

No. 4 hold - 1 @ 3.5"

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 4.5"

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 6531)

Manufacturers of Steel Bielefeld Maschinenbau- & Eisenwerke, & Eisenwerke, & Eisenwerke, & Eisenwerke

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 2.5" 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 1.64"

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 1.2"

Pitch of rivets 8.5"

Lap of plates or width of butt straps 18.8"

end plate

Per centages of strength of longitudinal joint

rivets 93.3

plate 85.5

Working pressure of shell by rules 181

Size of manhole in steel 16" x 12"

manhole

Size of compensating ring flanged 3.5"

No. and Description of Furnaces in each boiler 3 Bieghton

Material steel

Outside diameter 3.8.4"

Length of plain part

top

Thickness of plates

crown 1.33"

bottom 1.64"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 181

Combustion chamber plates: Material steel

Thickness: Sides 1.16"

Back 2.1"

Top 1.16"

Bottom 1.16"

Working pressure by rules 180

Pitch of stays to ditto: Sides 9.4" x 9.4"

Back 9" x 9"

Top 9.4" x 9.4"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 180

End plates in steam space: 1808

Material of stays steel

Area at smallest part 1.730"

Area supported by each stay 91.39810"

Working pressure by rules 185

Material of stays steel

Thickness 1.53"

Pitch of stays 19.8" x 17.5"

How are stays secured D.N.

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 1.53"

Material of Lower back plate steel

Thickness 1.53"

Diameter of tubes 2.5"

Pitch of tubes 3.5" x 3.5"

Material of tube plates steel

Thickness: Front 1.53"

Back 3/4"

Mean pitch of stays 10.45"

Pitch across wide water spaces 13.5"

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 13.5"

Distance apart 9.8"

Number and pitch of stays 2 @ 9.3/4"

Working pressure by rules 181

Steam dome: description of joint to shell none

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of port 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

W218-0169

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. H. Patell

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* Stiles *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. 1/16" 5/8" bent. both 3/8" st. 1/8" 3/8"*
Material of Crank shaft *I. steel* Identification Mark on Do. *LLOYD'S N° 709 L.C.D. 8.10.25* Material of Thrust shaft *I. steel* Identification Mark on Do. *LLOYD'S N° 12247 L.C.D. 8.10.25*
Material of Tunnel shafts *I. steel* Identification Marks on Do. *LLOYD'S N° 709 L.C.D. 8.10.25* Material of Screw shafts *I. steel* Identification Marks on Do. *LLOYD'S N° 12247 L.C.D. 8.10.25*
Material of Steam Pipes *Solid drawn steel* ✓ Test pressure *540 lbs per 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.)

*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.

The amount of Entry Fee ... £ *5* :
Special ... £ *92* : *7*
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, *21.1.26.*
When received, *26.1.26.*

Committee's Minute *GLASGOW 26 JAN 1926*

Assigned *+ LMC 1, 26*

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



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Foundation