

REPORT ON MACHINERY

Received at London Office MON. AUG. 19 1920

Date of writing Report 19 When handed in at Local Office 19 Port of **HAMBURG**

No. in Survey held at Reg. Book. Date, First Survey Last Survey 19

on the **St. S. "MARIE REPPEL" No 345** (Number of Visits)

Master Built at **Postock** By whom built **FRANZ REPPEN** Tons } Gross
When built } Net

Engines made at **Postock** By whom made **FRANZ REPPEN** when made

Boilers made at **Postock** By whom made **FRANZ REPPEN** when made

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 **452** 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" 6.41" 68 1/2** Length of Stroke **47 1/2** Revs. per minute **70** Dia. of Screw shaft as per rule **14 5/8** Material of screw shaft **Steel**
as fitted **14 5/8**

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 **no** 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 **no** If two liners are fitted, is the shaft lapped or protected between the liners **no** Length of stern bush **42 in.**

Dia. of Tunnel shaft as per rule **13 7/32** Dia. of Crank shaft journals as per rule **13 7/32** Dia. of Crank pin **13 5/8** Size of Crank webs **8 1/2 x 2 1/4** Dia. of thrust shaft under collars **13 5/16** Dia. of screw **17 1/2** Pitch of Screw **17 5/8** No. of Blades **4** State whether moveable **yes** Total surface **83.6 sq ft**

No. of Feed pumps **2** Diameter of ditto **4 3/4** Stroke **23 1/2** Can one be overhauled while the other is at work **yes**

No. of Bilge pumps **2** Diameter of ditto **4 3/4** Stroke **23 1/2** Can one be overhauled while the other is at work **yes**

No. of Donkey Engines **4** Sizes of Pumps **7x5x5 7 1/2 x 7 1/2 x 8** No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room **6-3" Engine room stokehold 3 1/2 x 4** In Holds, &c. **6-3" 4 IN FORWARD BILGES. HOLD**
1-3" ROVECH **2 IN AFTER " HOLD**
1-3" TUNNEL/WELL.

No. of Bilge Injections **1** sizes **7/8** Connected to condenser, or to circulating pump **yes** Is a separate Donkey Suction fitted in Engine room & size **yes - 4"**

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 **no - closed**

Are all connections with the sea direct on the skin of the ship **yes** Are they Valves or Cocks **Valves and Cocks**

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 **no**

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**

Dates of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight **yes** Is it fitted with a watertight door **yes** worked from **Cylinder platform**

OILERS, &c.—(Letter for record **S**) Manufacturers of Steel

Total Heating Surface of Boilers **6393 sq ft** Is Forced Draft fitted **yes** No. and Description of Boilers **3 Single end multibubler**

Working Pressure **200 lbs.** Tested by hydraulic pressure to **400 lbs.** Date of test **10.19/14** No. of Certificate **2434**

Can each boiler be worked separately **yes** Area of fire grate in each boiler **150 sq ft - 50** No. and Description of Safety Valves to each boiler **2 Spring loaded** Area of each valve **9.84 sq in.** Pressure to which they are adjusted **250 lbs** Are they fitted with easing gear **yes**

Smallest distance between boilers or uptakes and bunkers or woodwork **16"** Mean dia. of boilers **105"** Length **144"** Material of shell plates **Steel**

Thickness **1.22"** Range of tensile strength **28-32 tons** Are the shell plates welded or flanged **no** Descrip. of riveting: cir. seams **spade riv.**
long. seams **all the same** Diameter of rivet holes in long. seams **1 1/32"** Pitch of rivets **13.45"** Lap of plates or width of butt straps **27.5 x 1.22"**

Per centages of strength of longitudinal joint rivets **101.9%** Working pressure of shell by rules **209.75 lbs.** Size of manhole in shell **11.8 x 15.7"**
plate **90%**

Size of compensating ring **27.6 x 31.5 x 1.22"** No. and Description of Furnaces in each boiler **3 horizontal** Material **Steel** Outside diameter **39.4"**

Length of plain part top **5.1"** Thickness of plates crown **1.05"** Description of longitudinal joint **welded** No. of strengthening rings **none**
bottom **0.65"**

Working pressure of furnace by the rules **258 lbs.** Combustion chamber plates: Material **Steel** Thickness: Sides **.63"** Back **.60"** Top **.65"** Bottom **.905"**

Pitch of stays to ditto: Sides **7.5" x 7.5"** Back **7.5" x 7.5"** Top **7.5" x 7.5"** If stays are fitted with nuts or riveted heads **yes** Working pressure by rules **215 lbs**

Material of stays **Steel** Diameter at smallest part **1.38"** Area supported by each stay **20.5 sq in.** Working pressure by rules **244 lbs.** End plates in steam space: Material **Steel** Thickness **1.02"** Pitch of stays **4.5"** How are stays secured **by nuts** Working pressure by rules **207 lbs** Material of stays **Steel**

Diameter at smallest part **1.68"** Area supported by each stay **27.0 sq in.** Working pressure by rule **216 lbs** Material of Front plates at bottom **Steel**

Thickness **1"** Material of Lower back plate **Steel** Thickness **.605"** Greatest pitch of stays **2.15"** Working pressure of plate by rules **214 lbs**

Diameter of tubes **3"** Pitch of tubes **4.25"** Material of tube plates **Steel** Thickness: Front **1"** Back **.845"** Mean pitch of stays **8.5"**

Pitch across wide water spaces **14.12"** Working pressures by rules **202.25 lbs.** Girders to Chamber tops: Material **Steel** Depth and thickness of girder at centre **5.65" x 1.49"** Length as per rule **30.7"** Distance apart **7.5"** Number and pitch of stays in each **3 - 7.5"**

Working pressure by rules **222 lbs.** Superheater or Steam chest; how connected to boiler **connected to boiler** Can the superheater be shut off and the boiler worked separately **no**

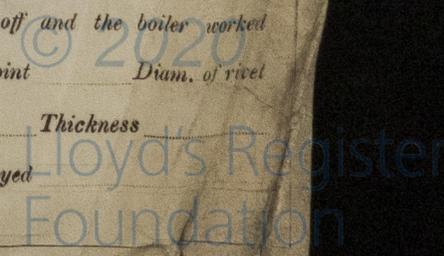
Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

006248-006257-0112



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two each top and bottom end connecting end bolts nuts, two main bearing bolts nuts, one set of coupling bolts nuts, one set each feed and bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts etc, one set each piston ring, for each engine, also list enclosed.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } { During erection on board vessel - - - } Total No. of visits

Is the approved plan of main boiler forwarded herewith

“ “ “ donkey “ “ “

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts Completion of pumping arrangements Boilers fixed Engines tried under steam Main boiler safety valves adjusted Thickness of adjusting washers Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do. Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do. Material of Steam Pipes Test pressure

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 engines and boilers of this vessel have not been built under Special Survey, but they have now been opened out & examined and the scantling compared with plans and first entry report supplied, and approved by the Committee. The scantling were found to be as stated on the report & plans and in accordance with the Rules of the Society (see Secretary's letter of 21.8.20.M.)

The machinery of this vessel is now in good & efficient condition, eligible in my opinion to be classed with the notation of LMC 10.20 without the X, subject to the safety valves being adjusted, and the engines tried under full working conditions. It was stated that this will be done before the vessel proceeds to sea. The vessel is at present laid up.

J.G. Mackintosh, Friedrich W.M.

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Table with columns for fees: The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any) and columns for 'When applied for' and 'When received'.

Committee's Minute

FRI. OCT. 22 1920

Assigned

Lb. 6.10.20

F.D.



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