

t. 4.

REPORT ON MACHINERY.

No. 1219

FEB 27 1914

Received at London Office Mon Oct 6 1913

of writing Report 29 Sept 1913 When handed in at Local Office

10 Port of

Stockholm

in Survey held at Stockholm

Date, First Survey 4th April Last Survey 24 Sept 1913

Book.

on the machinery of the vessel No 586

(Number of Visits 13)

Tons

Gross

Net

When built 1913

Built at Rotterdam By whom built Messrs G. Broeders Root

Lines made at Stockholm By whom made Messrs. J. & B. Bolinders' bold when made 1913

Horse Power as per Section 28 120 Owners when made

Port belonging to

Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

GINES, &c.—Description of Engines Bolinders' two stroke cycle reversible No. of Cylinders 2 No. of Cranks 2

Length of Stroke 410 mm Revs. per minute 245 Dia. of Screw shaft as per rule 142 mm Material of S.M. Steel

the screw shaft fitted with a continuous liner the whole length of the stern tube no. without liners Is the after end of the liner made water tight

the propeller boss 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

are fitted, is the shaft lapped or protected between the liners Length of stern bush 600 mm

Dia. of Tunnel shaft as per rule 140 mm Dia. of Crank shaft journals as per rule 145 mm Dia. of Crank pin 155 mm Size of Crank webs 220 mm Dia. of thrust shaft under

No. of Blades 3 State whether moveable no Total surface 8000 cm²

of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

of Bilge pumps 1 Diameter of ditto 100 mm Stroke 100 mm Can one be overhauled while the other is at work

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

Engine Room 1 In Holds, &c. Two or 2"

of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

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

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Screw shaft and Propeller

Is it fitted with a watertight door worked from

MANUFACTURERS, &c.—(Letter for record) Manufacturers of Steel

Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

Area of fire grate in each boiler No. and Description of Safety Valves to

Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Mean dia. of boilers Length Material of shell plates

Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Range of tensile strength Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Working pressure of shell by rules Size of manhole in shell

No. and Description of Furnaces in each boiler Material Outside diameter

Description of longitudinal joint No. of strengthening rings

Thickness of plates crown bottom Thickness: Sides Back Top Bottom

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

If stays are fitted with nuts or riveted heads Working pressure by rules End plates in steam space:

Area supported by each stay Working pressure by rules Material of stays

How are stays secured Working pressure by rules Material of Front plates at bottom

Working pressure of plate by rules

Thicknes Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Material of tube plates Thickness: Front Back Mean pitch of stays

Girders to Chamber tops: Material Depth and

Number and pitch of stays in each

Can the superheater be shut off and the boiler worked

Description of longitudinal joint Diam. of rivet

Material of flue plates Thickness

End plates: Thickness How stayed

Are they fitted with easing gear

Working pressure of end plates Area of safety valves to superheater

W1503-0054

Lloyd's Register
Foundation

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 4, 20, 22, 30, 27, 28, 21, 1, 13, 18, 22, 24 (two visits) 1913
{ During erection on board vessel - - - } 5, 6, 4, 8, 9
Total No. of visits 13

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 18x22 Slides Covers 18x22 Pistons 18x22 Rods

Connecting rods 20x30, 28x30 Crank shaft 4, 20, 1, 22 Thrust shaft 20, 22, 27, 1 Tunnel shafts 11, 24, 26, 13 Screw shaft 21, 1, 24 Propeller 24

Stern tube 24 Steam pipes tested Engine and boiler seatings Engines holding down bolts 21 Feb 1914

Completion of pumping arrangements 21 Feb 1914 Boilers fixed Engines tried under steam 18/9

Main boiler safety valves adjusted

Thickness of adjusting washers

Material of Crank shaft S.M. Steel Identification Mark on Do. 1.8.13 Lloyd's No. 464 Material of Thrust shaft S.M. Steel Identification Mark on Do. 1.8.13 Lloyd's No. 464

Material of Tunnel shaft Lloyd's No. 578 Identification Marks on Do. 4.15.11-13 Material of Screw shafts S.M. Steel Identification Marks on Do. 2.7.13 Lloyd's No. 464

Material of Steam Pipes

Test pressure

Is an installation fitted for burning oil fuel

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

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The designs of the crank, thrust & propeller shafts and of the connecting rods of this type and size of Bolinder motor have been submitted and approved (see Secretary's letters E. 7.3.1912 & E. 15.1.1913)

The crank shaft has been manufactured at the Lindvickens Steel Works and the thrust shaft, propeller shaft and connecting rods at the Bjornborg Steel Works, all in accordance with the Rules. The shafts and connecting rods have been also inspected while being rough turned and finished and found good and sound. Their materials have been tested by the undersigned and found to fill the Rule requirements.

The cylinders of cast iron have been examined and found sound. Thickness of cylinder walls stated to be 26 mm. and of water jackets 14 mm. Both cylinders tested with hydraulic pressure to 529 lbs. per sq. in., or twice the working pressure of 180 lbs. and found tight. They have been marked on upper flange of each cylinder (Lloyd's test 529 lbs. 1.8.13 A). Their water jackets have been tested to 50 lbs. and found tight. The silencer and its water jacket have been tested to 50 lbs. and found tight.

The motor has been tried in shop under full power in my presence and found to give an effect at normal load and 275 revolutions of 120 BHP. The motor has also been tried with a continuous overload at 134 BHP and a temporary overload at 142 BHP and found to work well.

The Society's Rules with regard to the details of construction, fitting of valves, lubrication, accessibility etc. have been adhered to, so far as concerns the motor itself. The remaining requirements of the Rules will have to be attended to at the fitting of the motor in the ship.

I am of opinion that this motor is of superior material and workmanship and, as it has been designed and constructed under my special survey, I have respectfully to submit that it will be eligible to be classed +LMC, as it has been fitted in ship to the satisfaction of the Society's local Surveyors.

The amount of Entry Fee ... £ : : When applied for, 25 Sept 1913
Special ... £ 8 : 0
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When received, 1913

It is respectfully submitted that the first entry be changed on completion of the fitting in ship.
(Signed) A. Isaksson
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

Assigned

no action



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These pages

Signal Letters

Official Number

136

No., Date, and

Whether British or Foreign Built

Foreign

Number of Decks

Number of Masts

Rigged ...

Stern ...

Build ...

Galleries ...

Head ...

Framework ...

vessel ...

Number of Buoys

Number of ...

and their ...

Total to quarter ...

to bottom of ...

No. of sets of Engines.

Description

One Bol

No. of Shafts.

Pa

Description

One

Iron or

Load

Under Tonnage

Space or space

Turret or Turret

Forecastle ...

Bridge space

Peep or Bre

Side Houses

Deck House

Chart House

Spaces for ...

Section 78

1894

Excess of H

Gr

Deductions.

Re

NOTE 1.—The

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NOTE 2.—The