Rpt. 4.

No. 14488.

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 5th Dec. 1945. When handed in at Local Office 12th Dec. 1945. Port of Gothenburg

No. in Reg. Book 25399 Survey held at Gothenburg Date, First Survey 5th September Last Survey 15th November 1945 (Number of Visits 21)

on the Single Screw Steamer "HALVARD BRATT" Tons Gross 1053 Net 531

Built at Elbing By whom built F. Schichau Yard No. 1102 When built 1921

Engines made at Elbing By whom made F. Schichau Engine No. 3160 When made 1921

Boilers made at Elbing By whom made F. Schichau Boiler No. 3467-68 When made 1921

Registered Horse Power Owners Rederi A-B. Adolf Port belonging to Gothenburg

Nom. Horse Power as per Rule 115 ~~105~~ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Open sea service.

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute 96

Dia. of Cylinders 351 x 631 x 987 mm. Length of Stroke 640 mm. No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule --- as fitted 190 mm. Crank pin dia. 190 mm. Crank webs Mid. length breadth 240 mm. Mid. length thickness 190 mm. Thickness parallel to axis --- Thickness around eye-hole --- shrunk

Intermediate Shafts, diameter as per Rule --- as fitted 180 mm.

Thrust shaft, diameter at collars as per Rule --- as fitted 180 mm. all round

Tube Shafts, diameter as per Rule --- as fitted ---

Screw Shaft, diameter as per Rule --- as fitted 205 mm.

Is the {xxx screw} shaft fitted with a continuous liner {---} {No}

Bronze Liners, thickness in way of bushes as per Rule --- as fitted ---

Thickness between bushes as per Rule --- as fitted ---

Is the after end of the liner made watertight in the propeller boss ---

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ---

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 ---

Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft Yes If so, state type Cedervall´s

Length of Bearing in Stern Bush next to and supporting propeller 1210 mm.

Propeller, dia. 2980 mm Pitch 3300 mm. No. of Blades 4 Material Bronze whether Moveable No Total Developed Surface 3.4 metres sq. ~~xxx~~

Feed Pumps worked from the Main Engines, No. 2 Diameter 53 mm. Stroke 375 mm. Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 1 Diameter 70 mm. Stroke 230 mm. Can one be overhauled while the other is at work ---

Feed Pumps { No. and size 2, 1-135x90x125 mm. (horizontal duplex) How driven Main engine Steam }

Pumps connected to the Main Bilge Line { No. and size 1 direct driven, 1 horizontal duplex, 1 vert.duplex 135x90x125 mm. How driven By main engine By steam By steam }

Ballast Pumps, No. and size 1 - 275x225x375 mm. (70 t/h) Lubricating Oil Pumps, including Spare Pump, No. and size ---

Are two independent means arranged for circulating water through the Oil Cooler --- Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps :—In Engine and Boiler Room 2 á 50 mm.

In Pump Room --- In Holds, &c. 2 á 50 mm. in each hold

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 - 130 mm. Independent Power Pump Direct Suctions to the Engine and Boiler Room Bilges, No. and size 1 - 130 mm.

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges No (strum-boxes)

Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Some,yes Are the Overboard Discharges 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 pass through the bunkers No pipes How are they protected ---

What pipes pass through the deep tanks No deep tanks Have they been tested as per Rule ---

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

Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from A platform above the upper deck.

MAIN BOILERS, &c.—(Letter for record s) Total Heating Surface of Boilers 2 x 86 = 172 M² = 1851 ft²

Which Boilers are fitted with Forced Draft None Which Boilers are fitted with Superheaters Both main boilers

No. and Description of Boilers Two Scotch boilers Working Pressure 14 kg/cm² = 199 lb

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ---

Can the donkey boiler be used for other than domestic purposes ---

PLANS. Are ~~xxxxx~~ plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers --- Donkey Boilers ---

(If not state date of approval)

Superheaters --- General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements ---

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied

The foregoing is a correct description.

Manufacturer.

Dates of Survey ~~xxxx~~ ~~xxxxx~~

During progress of work in shops - -

~~Completion~~ on board vessel - - - 5th September - 15th November, 1945.

Total No. of visits 21

Dates of Examination of principal parts—Cylinders 14.9.1945 Slides 14.9.1945 Covers 14.9.1945

Pistons 14.9.1945 Piston Rods 14.9.1945 Connecting rods 9.10.1945

Crank shaft 4.10.1945 Thrust shaft 4.10.1945 Intermediate shafts 4.10.1945

Tube shaft --- Screw shaft 15.9.1945 Propeller 9.10.1945

Stern tube 9.10.1945 Engine and boiler seatings 9.10.1945 Engines holding down bolts 9.10.1945

~~Completion~~ sea connections 10.9.1945

~~Completion~~ of pumping arrangements Boilers fixed 1.12.1945 Engines tried under steam 15.11.1945

Main boiler safety valves adjusted 9.11.1945 Thickness of adjusting washers ---

Crank shaft material --- Identification Mark --- Thrust shaft material --- Identification Mark ---

Intermediate shafts, material --- Identification Marks --- Tube shaft, material --- Identification Mark ---

Screw shaft, material --- Identification Mark --- Steam Pipes, material Steel Test pressure 28 kg/cm^2 Date of Test 15.10.1945

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 the Rules for the use of oil as fuel been complied with ---

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with ---

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with Not desired

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.

Now done: All main and auxiliary machinery opened up and examined and found or placed in order. The scantlings of the shafting has been checked and found to be in accordance with the plans referred to in the Secretary's letter, initialled "E" of the 14th September, 1945, regarding the machinery of this vessel.

The following repairs carried out due to wear and tear:

HP piston rod skimmed in lathe and rings in the "Hoglands" box renewed.

HP pistons rings and IP pistan valve rings renewed.

White metal in all excentric straps renewed.

Main engine feed pump plungers renewed.

Main engine feed pump valve lids renewed.

The propeller shaft taken to shop, skimmed in lathe in way of stem and neck bushes, and gland and neck bushes renewed.

The donkey pump renewed.

RECOMMENDATION:

The machinery of this vessel is eligible in my opinion to be classed LMC 11,45. Working pressure of boilers 199 lbs. per square inch. Screw shaft (OG) seen 9,45.

Surveyors' Office, Gothenburg.

(The Surveyors are requested not to write on or below the space for Committee's Minutes)

Certificate to be sent to

The amount of Entry Fee ... Kr. 57:00 :
Special ... ... Kr. 490:00 :
Donkey Boiler Fee ... ... £ : --- :
Travelling Expenses (if any) £ : --- :

When applied for, 12/12 1945.

When received, --- 19--

G. Svanders

Engineer Surveyor to Lloyd's Register of Shipping.

Date FRI. 8 FEB 1946

Committee's Minute LMC 11,45
3(OG) 9.45

"CERTIFICATE WRITTEN"

Rpt. 5a.

Date of writing Rep

No. in Reg. Book. 25399 ..... or

Master .....

Engines made

Boilers made

Nominal Hors

MULTITU

Manufacturer

Total Heating

No. and Desc

Tested by hy

Area of Fire

Area of ea

In case of d

Smallest dis

Smallest di

Largest inter

Thickness

long. seams

Percentage

Percentage

Thickness

Material...

Length of

Dimensions

End plates

How are st

Tube plates

Mean pitch

Girders to

at centre

in each

Tensile str

Pitch of st

Working p

Thickness

Pitch of

Working

Diameter

Working

Diameter