

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 2nd June 1937. When handed in at Local Office

Port of **STETTIN**No. in Survey held at **Berlin - Pegel**  
Reg. Book.Date, First Survey 16th June, 1936 Last Survey 14th May, 1937.  
(Number of Visits 27)

on the \_\_\_\_\_ Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_  
 Built at **Kiel** By whom built **Howaldts Werke A.G.** Yard No. **756** When built **1937**  
 Engines made at **Berlin - Pegel** By whom made **Rheinmetall-Borsig** Engine No. **8144** When made **1937**  
 Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
 Nom. Horse Power as per Rule **424** Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_  
 Trade for which Vessel is intended \_\_\_\_\_

**ENGINES, &c.**—Description of Engines **Double compound, Lenz type No 12** Revs. per minute **80**  
 Dia. of Cylinders **2 x 560, 2 x 1200 mm** Length of Stroke **1200 mm** No. of Cylinders **4** No. of Cranks **4**  
 Crank shaft, dia. of journals as per Rule **366 mm** as fitted **380 mm** Crank pin dia. **380 mm** Crank webs Mid. length breadth **645 mm** Thickness parallel to axis **230 mm**  
 Intermediate Shafts, diameter as per Rule **350 mm** as fitted **365 mm** Thrust shaft, diameter at collars as per Rule **366 mm** as fitted **380 mm**  
 Tube Shafts, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Screw Shaft, diameter as per Rule **388 mm** as fitted **418 mm** Is the { screw } shaft fitted with a continuous liner { yes }  
 Bronze Liners, thickness in way of bushes as per Rule **19.5 mm** as fitted **22.5 mm** Thickness between bushes as per Rule **14.5 mm** as fitted **14.5 mm** 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 \_\_\_\_\_  
 Length of Bearing in Stern Bush next to and supporting propeller **1810 mm**  
 Propeller, dia. **5334 mm** Pitch **4850 mm** No. of Blades **4** Material **bronze** whether Moveable **yes** Total Developed Surface **94.08** sq. feet  
 Feed Pumps worked from the Main Engines, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 Bilge Pumps worked from the Main Engines, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 Feed Pumps { No. and size \_\_\_\_\_ How driven \_\_\_\_\_ } Pumps connected to the { No. and size \_\_\_\_\_ How driven \_\_\_\_\_ } Main Bilge Line \_\_\_\_\_  
 Ballast Pumps, No. and size \_\_\_\_\_ Lubricating Oil Pumps, including Spare Pump, No. and size \_\_\_\_\_  
 Are two independent means arranged for circulating water through the Oil Cooler \_\_\_\_\_ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room \_\_\_\_\_ In Holds, &c. \_\_\_\_\_

**Main Water Circulating Pump Direct Bilge Suctions, No. and size \_\_\_\_\_** **Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size \_\_\_\_\_**  
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes \_\_\_\_\_  
 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 \_\_\_\_\_  
 Are all Sea Connections fitted direct on the skin of the ship \_\_\_\_\_ Are they fitted with Valves or Cocks \_\_\_\_\_  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates \_\_\_\_\_ Are the Overboard Discharges 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 \_\_\_\_\_  
 What Pipes pass through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_  
 What pipes pass through the 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 \_\_\_\_\_  
 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 \_\_\_\_\_ Is the Shaft Tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

**MAIN BOILERS, &c.**—(Letter for record \_\_\_\_\_) Total Heating Surface of Boilers **530 sqm**  
 Is Forced Draft fitted **yes** No. and Description of Boilers **2** Working Pressure **15.4 kg/cm<sup>2</sup>**  
**IS A REPORT ON MAIN BOILERS NOW FORWARDED?** \_\_\_\_\_  
**IS A DONKEY BOILER FITTED?** \_\_\_\_\_ If so, is a report now forwarded? \_\_\_\_\_  
 Is the donkey boiler intended to be used for domestic purposes only \_\_\_\_\_  
**PLANS.** Are approved plans forwarded herewith for Shafting **25.4.14.4** Main Boilers \_\_\_\_\_ Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_  
 (If not state date of approval) \_\_\_\_\_  
 Superheaters \_\_\_\_\_ General Pumping Arrangements \_\_\_\_\_ 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  
**1/2 crank shaft, 2 piston rods, 1 set of L.P. piston rings, 2/2 bottom end braces, 4/2 crosshead braces, 1 set of coupling bolts.**

The foregoing is a correct description,

Manufacturer.

RHEINMETALL-BORSIG  
AKTIENGESELLSCHAFT/WERK BORSIG BERLIN-TEGEL

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Lloyd's Register  
Foundation

W21-0215



Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - - -

Total No. of visits

1936: 16th, 30th June, 1936, 23rd July, 3rd, 14th, 29th Aug, 5th, 8th, 12th, 15th Sept, 12th, 22nd, 24th Oct, 6th, 12th, 27th Nov, 4th, 10th, 12th Dec, 1937: 6th, 14th, 20th Jan, 18th March, 10th, 14th May.

Dates of Examination of principal parts - Cylinders 17.7. - 22.10.36. Valves 6.11. - 14.1.37. Covers 17.7. - 6.11.36.  
Pistons 3.8.36 - 14.1.37. Piston Rods 8.8.36 - 6.1.37. Connecting rods 14.8.36 - 14.1.37.  
Crank shaft 23.4.36 - 27.10.36. Thrust shaft 12.9. - 10.12.36. Intermediate shafts  
Tube shaft Screw shaft Propeller  
Stern tube Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections Boilers fixed Engines tried under steam  
Completion of pumping arrangements Thickness of adjusting washers No. 1101-2  
Main boiler safety valves adjusted Identification Mark N.S. 27.10.36. Thrust shaft material S.M. steel Identification Mark N.S. 27.10.  
Crank shaft material S.M. Steel. Identification Marks No 12684. Tube shaft, material Identification Mark  
Intermediate shafts, material Identification Marks No 12684. Steam Pipes, material Test pressure Date of Test  
Screw shaft, material S.M. Steel Identification Mark MB 17.4.36. Is the flash point of the oil to be used over 150°F.  
Is an installation fitted for burning oil fuel 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 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  
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.)

This Engine has been built under Special Survey in accordance with the Local Rules and the approved plans for shafting. All steel material has been tested which was used in the construction; the workmanship thereon is satisfactory. The H.P. cylinders were tested to 20 kgs, the I.P. cylinders to 9 kgs, the main stop valve and distribution piece to 45 kgs per sq. cm. water pressure and found tight and sound.  
This engine is eligible in my opinion for part of the record of, +LMC- when satisfactorily fitted on board and tried under working conditions.

The amount of Entry Fee RM. 40. - : When applied for.  
Special ... £ 709 : 15th May 1937  
Donkey Boiler Fee ... £ - : - : When received.  
Travelling Expenses (if any) £ 236: - : 27.7.1937

M. Gold  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 17 AUG 1937  
Assigned See Ham. JE 22443