

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

24 FEB 1936

Date of writing Report 10th Feb. 19 When handed in at Local Office 19 Port of STETTIN

No. in Survey held at Berlin-Tegel Date, First Survey 17th July Last Survey 1st Febr. 1936  
Reg. Book. EILBEK (Number of Visits 19)

Built at Lubeck By whom built Lubecker Maschinenbau Ges Yard No. 347 Tons 1936

Engines made at Berlin-Tegel By whom made Rheinmetall-Borsig Engine No. 8142 When made 1936

Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_

Registered Horse Power \_\_\_\_\_ Owners Knohr & Pürchard Port belonging to Hamburg

Nom. Horse Power as per Rule 225 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

Trade for which Vessel is intended \_\_\_\_\_

ENGINES, &c.—Description of Engines, Lenz "type" Revs. per minute 100  
Dia. of Cylinders 2 of 420, 2 of 900 mm Length of Stroke 900 mm No. of Cylinders 4 No. of Cranks 4

Crank shaft, dia. of journals 207.5 mm as per Rule 285 mm as fitted Crank pin dia. 285 mm Crank webs Mid. length breadth 560 mm Thickness parallel to axis 168 mm  
Mid. length thickness 168 mm shrunk Thickness around eye-hole 135 mm

Intermediate Shafts, diameter \_\_\_\_\_ as per Rule \_\_\_\_\_ as fitted Thrust shaft, diameter at collars \_\_\_\_\_ as per Rule 207.5 mm as fitted 285 mm

Tube Shafts, diameter \_\_\_\_\_ as per Rule \_\_\_\_\_ as fitted Screw Shaft, diameter \_\_\_\_\_ as per Rule \_\_\_\_\_ as fitted Is the {tube} shaft filled with a continuous liner {screw}

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 \_\_\_\_\_

Propeller, dia. \_\_\_\_\_ Pitch \_\_\_\_\_ No. of Blades \_\_\_\_\_ Material \_\_\_\_\_ whether Movable \_\_\_\_\_ Total Developed Surface \_\_\_\_\_ 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. 2 Diameter 85 mm Stroke 375 mm Can one be overhauled while the other is at work yes

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 Pump 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 300 sqm. Working Pressure \_\_\_\_\_

Is Forced Draft fitted \_\_\_\_\_ No. and Description of Boilers \_\_\_\_\_

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 yes Main Boilers \_\_\_\_\_ Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_

Superheaters \_\_\_\_\_ General Pumping Arrangements \_\_\_\_\_ Oil fuel Burning Piping Arrangements \_\_\_\_\_

## SPARE GEAR.

Has the spare gear required by the Rules been supplied \_\_\_\_\_

State the principal additional spare gear supplied one piston rod, 1 bottom end & 2 top end brasses with bolts and nuts. 2 main bearing brasses & bolts. 2 sets of H.P. & 2 sets of L.P. piston rings. 2 H.P. & 2 L.P. valves. 6 valve spindles with bushes & springs. 4 adjusters with bushes. 1 set of coupling bolts. 10% of all studs. 2% of condenser tubes and ferrules. Bilge pumps. 2 lever links. 1 set of valves. 1 escape valve spring.

The foregoing is a correct description,

**RHEINMETALL-BORSIG**  
AKTIENGESELLSCHAFT  
WERK BORSIG BERLIN-TEGEL

Manufacturer.



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Foundation

007930-007937-0025

NOTE.—The words which do not apply should be deleted.

1935: July 19<sup>th</sup>, August 7, 16, 22, Sept. 2, 16, 30, Oct. 8, 24, Nov. 5, 19, 28,  
 Dec. 14, 30. 1936: Jan. 3, 8, 12, Febr. 1st.

Dates of Survey while building  
 During progress of work in shops - - -  
 During erection on board vessel - - -  
 Total No. of visits 19.

Dates of Examination of principal parts—Cylinders 16.9.35 - 8.12.36. Slides valves: 14.12.35. Covers 14.12.35.  
 Pistons 30.9.35 - 1.2.36. Piston Rods 17.4.35 - 8.1.36. Connecting rods 8.10.35 - 28.1.36.  
 Crank shaft 2.9.35 - 12.1.36. Thrust shaft 16.8.35 - 28.1.36. Intermediate shafts \_\_\_\_\_  
 Tube shaft \_\_\_\_\_ Screw shaft \_\_\_\_\_ Propeller \_\_\_\_\_  
 Stern tube \_\_\_\_\_ Engine and boiler seatings \_\_\_\_\_ Engines holding down bolts \_\_\_\_\_  
 Completion of fitting sea connections \_\_\_\_\_  
 Completion of pumping arrangements \_\_\_\_\_ Boilers fixed \_\_\_\_\_ Engines tried under steam \_\_\_\_\_  
 Main boiler safety valves adjusted \_\_\_\_\_ Thickness of adjusting washers \_\_\_\_\_ No. 2411  
 Crank shaft material S.M. Steel. Identification Mark N.S. 14.12.35. Thrust shaft material S.M. steel. Identification Mark F.S. 17.6.35.  
 Intermediate shafts, material \_\_\_\_\_ Identification Marks \_\_\_\_\_ Tube shaft, material \_\_\_\_\_ Identification Mark \_\_\_\_\_  
 Screw shaft, material \_\_\_\_\_ Identification Mark \_\_\_\_\_ Steam Pipes, material \_\_\_\_\_ Test pressure \_\_\_\_\_ Date of Test \_\_\_\_\_  
 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 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 yes. If so, state name of vessel "Steinbock"

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
 This engine has been built under Special Survey in accordance with the Society's Rules and the approved plan of the crank shaft. All steel material used in construction has been tested, the workmanship thereon is efficient. The H.P. cylinders were tested to 19, the L.P. cylinders to 9 and the main stop valve with distribution piece to 45 kgs per sqm. water pressure and found tight and sound, also the condenser at 2 kgs. water pressure. This engine is in my opinion eligible for the record of "+LMC", when satisfactorily fitted on board and tried under working conditions.

The amount of Entry Fee ... RM: 32 - When applied for, \_\_\_\_\_  
 Special ... \$ " 450 - 10th Feb. 1936  
 Donkey Boiler Fee ... \$ " \_\_\_\_\_ : When received, \_\_\_\_\_  
 Travelling Expenses (if any) \$ " 195 - 15.4.1936  
16/4

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

Committee's Minute  
 Assigned See Ham. JE 21905



The Surveyors are requested not to write on or below the space for Committee's Minute.

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