

REPORT ON OIL ENGINE MACHINERY.

No. 19576

Received at London Office

23 OCT 1930

Date of writing Report 16th Oct. 1930 When handed in at Local Office

Port of HAMBURG

No. in Survey held at KIEL

Date, First Survey 3rd Febr. 1930 Last Survey 6th Oct. 1930

Reg. Book. Single on the Twin Triple Quadruple

Screw vessel

J. H. SENIOR

Oil Engines

Tons Gross Net

Built at EMDEN

By whom built NORDSEEWERKE

Yard No. 173

When built

Engines made at KIEL

By whom made FRIED. KRUPP-GERMANIAWERFT A.G. Engine No. 3886

When made

Donkey Boilers made at KIEL

By whom made FRIED. KRUPP-GERMANIAWERFT A.G. Boiler No. 3798

When made

Brake Horse Power 2 x 2500

Owners HANDBERG SHIPPING COMPANY

Port belonging to DANZIG

Nom. Horse Power as per Rule 1496

Is Refrigerating Machinery fitted for cargo purposes. no

Is Electric Light fitted yes

Trade for which vessel is intended

26 3/4 - 51 3/16

TYPE OF ENGINES, &c.—Type of Engines KRUPP DIESEL ENGINES 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 680 mm Length of stroke 1300 mm No. of cylinders 2 x 6 No. of cranks 2 x 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1010 mm Is there a bearing between each crank yes

Revolutions per minute 90 Flywheel dia. 2300 mm Weight 9000 kg Means of ignition Diesel principle Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule 450 mm as fitted 450 mm Crank pin dia. 450 mm Crank Webs Mid. length breadth R 275 R 425 Thickness parallel to axis 280 mm

one with Tumbler shaft as per Rule as fitted. Intermediate Shafts, diameter as per Rule 135 in one with Flywheel shaft as per Rule Thrust Shaft, diameter at collars as fitted 440 mm

Tube Shaft, diameter as per Rule as fitted. Screw Shaft, diameter as per Rule as fitted. Is the tube screw shaft fitted with a continuous liner

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

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

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. If so, state type. Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

forced Thickness of cylinder liners 50 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material lagged. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

cooling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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

Pumps connected to the Main Bilge Line No. and Size How driven

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size one of 22 m³/h of rotary type attached to each Main Engine

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces Holds, &c.

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 Spaces

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 platform 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

apartment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

on a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. one on each Engine No. of stages 3 Diameters 800/700/175 Stroke 900 mm Driven by Main Engines

Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 320/280/80 Stroke 300 mm Driven by Aux. Engines

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Reversing Air Pumps, No. 3 on each Main Engines Diameter 800 mm Stroke 1300 mm Driven by Main Engine

Auxiliary Engines crank shafts, diameter as per Rule 167 mm as fitted 175 mm, crank pin 170 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule. yes

Are the internal surfaces of the receivers be examined. yes What means are provided for cleaning their inner surfaces covers

Is there a drain arrangement fitted at the lowest part of each receiver. yes

High Pressure Air Receivers, No. 2 Cubic capacity of each 300 litres Internal diameter 400 mm thickness 18 mm

Seamless, lap welded or riveted longitudinal joint seamless Material S. M. Steel Range of tensile strength 46-52 kg/cm² Working pressure by Rules 93 kg/cm²

Working Air Receivers, No. 5 Total cubic capacity 5 x 2700 litres Internal diameter 1120 mm thickness 36 mm

Seamless, lap welded or riveted longitudinal joint seamless Material S. M. Steel Range of tensile strength 46-52 Working pressure by Rules 74 kg/cm²

Receiver for Whistle riveted " J. M. Steel " 41-47 " " 18 kg/cm²

cubic capacity 2500 litre

5500-6012-00-109200

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

PLANS. Are approved plans forwarded herewith for Shafting *yes, crank shaft* Receivers *16.7.30, 4/1.30, 24/12.29* Separate Tanks

Donkey Boilers *yes* General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR *All articles as required by Section 6 page 117 of the Rules for Construction & Survey of Diesel Engines and their Auxiliaries (1929-30) have been supplied with*

The foregoing is a correct description,

FRIEDRICH KRUPP
GERMANIA WERFT
Kaiserliche Werft

Manufacturer.

Dates of Survey while building
During progress of work in shops -- *1930 Feb. 3, 5, 14. March 7, 26. April 9, 11, 23, 28. May 2. June 4, 18. July 5, 11, 14, 18, 21, 23. Aug. 1, 4, 8, 11, 13, 18, 20. Sept. 3, 8, 10, 15, 26, 29. Oct. 1, 3, 6.*
During erection on board vessel --
Total No. of visits *Kamp - 34*

Dates of Examination of principal parts—Cylinders *7/8, 18/7 1/8, 30* Covers *18/8, 8/9* Pistons *11/7, 2/7, 13/8* Rods *11/7, 21/7* Connecting rods *20/8, 30*
Crank shaft *4/8, 30* Flywheel shaft *4/8, 30* Thrust shaft *4/8, 30* Intermediate shafts Tube shaft
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions
Crank shaft, Material *S. M. Steel* Identification Mark *K.H. 14221, 21.6.30* Flywheel shaft, Material *S. M. Steel* Identification Mark *K.H. 14221, 21.6.30*
Thrust shaft, Material *S. M. Steel* Identification Mark Intermediate shafts, Material Identification Marks
Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

Is the flash point of the oil to be used over 150° F. *yes*
Have the requirements of the Rules for oil fuel pipes and tank fittings 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

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *Cargawite, Peter Herold, Furness Yard*

General Remarks (State quality of workmanship, opinions as to class, &c. *The parts surveyed here are:*

Port - Starb. Main Engines without line shafting. & Aux. Diesel Engine sets with Generators & Air Compressors. & Blast Air Receivers, 1 riveted Air Receiver for whistle and all the spare parts.

The machinery has been built under special survey in accordance with the approved plans the Secretary's letters and otherwise in conformity with the requirements of the Rules.

The materials are made at works recognized by the Committee and tested by the Port Surveyors. Workmanship & materials are of good quality.

*The machinery is eligible in my opinion for notation of * LMC Oil Engine with date subject to satisfactory installation on board and examination under working & maneuvering condition.*

The Engines have been shipped to Emden.

The amount of Entry Fee ... £ *4* : *16* :
Special ... £ *109* : *18* :
Donkey Boiler Fee ... £ *14* : *6* :
Travelling Expenses (if any) £ *14* : *6* :
When applied for, *18.10.19.30*
When received, *25.11.19.30*

Committee's Minute *TUE. 5. MAY 1930*

Assigned *See F.C. Rpt.*

A. Carstensen
Engineer Surveyor to Lloyd's Register of Shipping.



Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)