

REPORT ON OIL ENGINE MACHINERY.

No. 8012.

22 JUN 1929

Received at London Office

Date of writing Report 19th June 1929. When handed in at Local Office

Port of Copenhagen.

Survey held at

Date, First Survey 18th Aug. 1928. Last Survey 1st June 1929

Book.

Number of Visits 55.

on the Single Triple Quadruple Screw vessel

(MITSUI II.) Tons { Gross Net

at Tama, Japan. By whom built Messrs Mitsui Bussan Kaisha Yard No. 160 When built

Engines made at Copenhagen. By whom made Messrs Akt & Burmeister & Wain Engine No. 1584 When made 1929

Boilers made at By whom made Maskin og Skibsbyggeri Designated "MITSUI II." Boiler No. When made

Horse Power 1400. Owners Port belonging to

Horse Power as per Rule 271. Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

for which vessel is intended

ENGINES, &c.—Type of Engines Vertical Diesel Oil Engine (sprunk type) (solid inflation) 2 or 4 stroke cycle 4 Single or double acting Single

Working pressure in cylinders 35 kg/cm² Diameter of cylinders 550 mm = 21 5/8" Length of stroke 1000 mm = 29 1/2" No. of cylinders 6 No. of cranks 6

Revolutions per minute 140. Is there a bearing between each crank

Distance between bearings, adjacent to the Crank, measured from inner edge to inner edge 730 mm

Turning wheel dia. 1362 mm Weight 435 kg. Means of ignition Air Compression Kind of fuel used Grade with flash point above 150° F.

Shaft, dia. of journals as per Rule 340 mm Crank pin dia. 340 mm Crank Webs as per Rule 193 mm Mid. length breadth 670 mm Thickness parallel to axis 213 mm

Intermediate Shafts, diameter as per Rule 340 mm Thrust Shaft, diameter at collars as per Rule 340 mm

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

Thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in 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

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

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

Number of blades Material whether Moveable Total Developed Surface sq. feet

Means of reversing Engines Direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Means of lubrication

Thickness of cylinder liners 38 mm Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with

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

Sea Water Pumps, No. 1 off - centrifugal - 80 tons. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Pumps worked from the Main Engines, No. 2 off Diameter of trunks 150 mm Stroke 175 mm Can one be overhauled while the other is at work

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

Auxiliary Pumps, No. and size 1 off, Rotary wing pump - 150 tons Lubricating Oil Pumps, including Spare Pump, No. and size 2 off - Cog wheel pumps - 30 tons each

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

in Machinery Spaces

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are the Bilge Suctions in the Machinery Spaces

Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Are they fitted with Valves or Cocks

Are they easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Sea Connections fitted direct on the skin of the ship

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 the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

Have they been tested as per Rule

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

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

Air Compressors, No. none No. of stages 2 Diameters 320 mm - 280 mm Stroke 170 mm Driven by

Auxiliary Air Compressors, No. 2 off No. of stages 2 Diameters 210 mm - 176 mm Stroke 216 mm Driven by Aux. Diesel engines

Auxiliary Air Compressors, No. 1 off No. of stages 2 Diameters 90 mm - 35 mm Stroke 120 mm Driven by hand

Engines crank shafts, diameter as per Rule 161.8 mm as fitted 170 mm

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

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

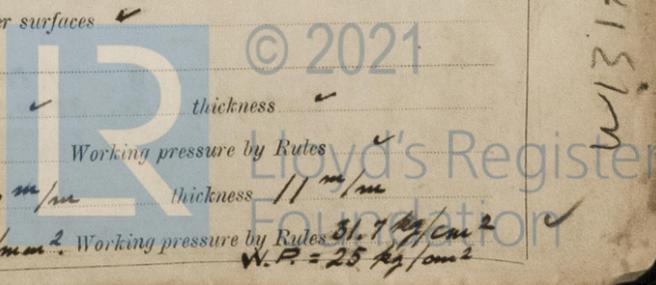
Are there a drain arrangement fitted at the lowest part of each receiver

Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

Are they seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Starting Air Receivers, No. One off. Total cubic capacity 250 Litres Internal diameter 380 mm thickness 11 mm

Are they seamless, lap welded or riveted longitudinal joint Lap welded Material S.M. Steel Range of tensile strength 38.8 kg/cm² Working pressure by Rules 31.7 kg/cm² W.P. = 25 kg/cm²



W1317-0057

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting of crank shafts Receivers
(If not, state date of approval)

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR As per accompanying list.

The foregoing is a correct description,
BURMEISTER & WAINSKABET
MASKIN- OG SKIBSBYGGERI

Manufacturer.

Dates of Survey while building
During progress of work in shops - 18 Aug. - 1, 4, 8, 13, 17, 18, 28; 19/11, 4/12, 19/12, 21/12, 29/12, 28.
During erection on board vessel - 13, 15, 21, 27 Feb. - 2, 7, 11, 13, 15, 18, March - 11, 20 April - 4, 28 May - 1 June 1929.
Total No. of visits 55.

Dates of Examination of principal parts - Cylinders and Covers 19/11, 4/12, 19/12, 21/12, 29/12, 28.
Crank shaft 18/8, 9/9, 17/9, 12/10, 17/11, 28. Flywheel shaft ✓ Thrust shaft (Combined with crank shaft) ✓ 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 LLOYD'S No. 9707, 17.11.28 Flywheel shaft, Material ✓ Identification Mark ✓
Thrust shaft, Material } 7/8 cast 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

In accordance with the Rules for Special Survey we have examined the material and workmanship from the commencement of construction of the main and auxiliary engines with their accessories until the running test under full power working conditions on the test bed in the shop and found all good and efficient in every respect.
The material used in the construction of the engines and air receiver have been tested as required by the Rules, as of us or as per test certificates produced.
The dimensions are as specified and in accordance with the Rules, the approved plans and as required in the Rules of Letter E. dated the 16th July 1928.

Recommend the vessel to have notation in the Register Book of **L.M.C.** - with date, and notation of OIL ENGINES when the machinery has been fitted on board under the supervision and tested to satisfaction of the local Surveyor to this Society.

The amount of Entry Fee ... £. 58.24 :
4/5 Special ... £. 955.86 :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £. 1.50 :
Late fee ... £. 30.00 :
When applied for, 20.6.1929
When received, 8.8.29

Committee's Minute FRI. 16 AUG 1929
Assigned see Minute on Kobe Rpt 65-76

A. O. J. Beck, Klausen
Engineer Surveyor to Lloyd's Register of Shipping
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Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)