

REPORT ON OIL ENGINE MACHINERY

No. 7325

23 AUG 1926

Received at London Office 9761 9th 26

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Writing Report 18th August 1926. When handed in at Local Office

Port of Copenhagen

Survey held at Copenhagen

Date, First Survey 11th March

Last Survey 30th July 1926

Number of Visits 39

on the ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel

(MITSUI 3)

Tons Gross Net

at Sama, Japan By whom built Mitsui Bussan Kaisha Yard No. When built

made at Copenhagen By whom made Akt. Burmister & Hain's Maskin og Ikselbyggeri Engine No. 1271 When made 1926

Boilers made at By whom made Boiler No. When made

Horse Power 950 Owners Port belonging to

Horse Power as per Rule 2.24 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 (Frank type) 2 or 4 stroke cycle 4 Single or double acting single

pressure in cylinders 35 kg/cm² Diameter of cylinders 500 mm Length of stroke 900 mm No. of cylinders 6 No. of cranks 6

bearings, adjacent to the Crank, measured from inner edge to inner edge 685 mm Is there a bearing between each crank Yes

Revolutions per minute 160 Flywheel dia. 1900 mm Weight 4.1 tons Means of ignition air compression Kind of fuel used Crude oil, flash point above 150°F

Shaft, dia. of journals as fitted 310 mm Crank pin dia. 310 mm Crank Webs Mid. length breadth 600 mm shrunk Thickness parallel to axis 195 mm

Intermediate Shafts, diameter as fitted 310 mm Thrust Shaft, diameter at collars as fitted 300 mm

Screw Shaft, diameter as fitted 310 mm Is the tube shaft fitted with a continuous liner

Liners, thickness in way of bushes as fitted Thickness between bushes as fitted Is the after end of the liner made watertight in the stern tube

Propeller, dia. 1100 Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

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

Thickness of cylinder liners 36 mm Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with lagging material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Water Pumps, No. One centrifugal, 50 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 trunk 150 mm Stroke 80 mm Can one be overhauled while the other is at work

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

Pumps, No. and size One rotary wing pump, 100 tons Lubricating Oil Pumps, including Spare Pump, No. and size 2 off, Cog wheel pumps, 25 tons each

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

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

Are the Bilge Suctions in the Machinery Spaces 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 fitted with Valves or Cocks

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

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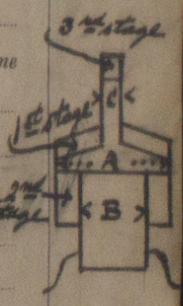
RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

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

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

Pressure Air Receivers, No. 2 Cubic capacity of each 1-250 litres Internal diameter 400 mm thickness 19 mm

lap welded or riveted longitudinal joint Material S.M. Steel Range of tensile strength 36.4-37.7 kg/cm² Working pressure by Rules 65 ATM.



Copenhagen Report No. 7325

Lloyd's Register Foundation
W681-0150
W681-0152

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval) *Yes*

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR *As per accompanying list, - to be checked when fitted onboard the vessel*

The foregoing is a correct description,

AKTIESELSKABET
BURNISTER & WAIN
MÅSKIN OCH LIBSBYGGERI

Manufacturer.

Dates of Survey while building { During progress of work in shops - 11, 22, 24, 25, 31 March, 6, 8, 13, 19, 20, 23 April - 5, 6, 8, 11, 13, 14, 15, 17, 18, 19, 20, 21, 22, 27, 28, 29, 31 May, 1, 2, 4, 5, 8, 14, 19, 22 June, 8, 16, 31 July 1926
During erection on board vessel -
Total No. of visits 39.

Dates of Examination of principal parts - Cylinders - and - Covers 4/5, 11/5, 15/5, 19/5, 27/5, 26. Pistons 1/16, 14/16, 20/16, 22/16, 26 Rods Connecting rods 3/3, 23/23
Crank shaft 22/4, 22/5, 1926 Flywheel shaft *see crank shaft* Thrust shaft 8/23, 22/5, 1926 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 *in shop, 19/6*
Crank shaft, Material *S.M.I. Steel* Identification Mark *LLOYD'S NB110. 22.5.26* Flywheel shaft, Material *see crank shaft* Identification Mark
Thrust shaft, Material *S.M.I. Steel* Identification Mark *LLOYD'S NB111. 22.5.26* 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*

Is this machinery duplicate of a previous ease *No* 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*

examined the material and workmanship from the commencement of construction until the running test of the main and liary engines with their air compressors etc. under full power working condition on the test bench and found to work satisfactor

The material used in the construction of the engines and the injection air receivers have been tested as required by the either by us or as per certificates produced. -

The dimensions are as specified and in accordance with the Rules, the approved plans and as per London letter dated the 22nd January 1926. - The Intermediate and Screw shafts,

the 29th March 1926 have not been made here.

Recommend the vessel to have notation in the Register Book of **LMC** with date and record of OIL ENGINES - when the machinery has been fitted onboard under the super and tested to the satisfaction of the local Surveyor to this Society.

The amount of Entry Fee ... *4/6* 61.48 : When applied for, 19
" *4/6* " Special *4/6* 819.84 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When received, 6.9.26

Committee's Minute FRI. 6 MAY 1927

Assigned *See Minute on Kobe Rpt*

5853 attached

d. J. J. J. *S. Clausen*
Engineer Surveyor to Lloyd's Register of Shipping



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