

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.

in 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

(MITSUBI 11.)

Tons ^{Gross}
_{Net}

at Tama, Japan.

By whom built Messrs Mitsui Bussan Kaisha

Yard No. 160 When built

es made at Copenhagen.

By whom made Messrs Akt & Burmeister & Wain

Engine No. 1584 When made 1929

Boilers made at

By whom made

Designated "MITSUBI 11."

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 (Drunk type) 2 or 4 stroke cycle 4 Single or double acting Single

um pressure in cylinders 35 kg/cm² Diameter of cylinders 550 mm = 21 5/8" Length of stroke 1000 mm = 39 3/8" No. of cylinders 6 No. of cranks 6

f bearings, adjacent to the Crank, measured from inner edge to inner edge 730 mm Is there a bearing between each crank No

tions per minute 140. ^{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 fitted} 340 mm Crank pin dia. 340 mm Crank Webs ^{Mid. length breadth} 670 mm Thickness parallel to axis 213 mm

eel Shaft, diameter ^{as per Rule} as fitted Intermediate Shafts, diameter ^{as per Rule} as fitted Thrust Shaft, diameter at collars ^{as fitted} 340 mm

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

ie 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

er boss ✓ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

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 ✓

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

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

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

ducting 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 ✓

ng 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 yes

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

st 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.

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

s, No. and size:—In Machinery Spaces ✓

lds, &c. ✓

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

ll the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ✓ Are the Bilge Suctions in the Machinery Spaces

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

l Sea Connections fitted direct on the skin of the ship ✓ Are they fitted with Valves or Cocks ✓

ey 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 ✓

ey 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 ✓

pipes pass through the bunkers ✓ How are they protected ✓

pipes pass through the deep tanks ✓ Have they been tested as per Rule ✓

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

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

rtment to another ✓ 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 ✓

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

l-Auxiliary Air Compressors, No. 1 off No. of stages 2 Diameters 20 mm - 35 mm Stroke 120 mm Driven by hand.

enging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

liary 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 yes.

ie internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces ✓

ere a drain arrangement fitted at the lowest part of each receiver yes

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

amless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓

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

amless, lap welded or riveted longitudinal joint Lap welded Material S.M. Steel Range of tensile strength 38.8 kg/mm² Working pressure by Rules 31.7 kg/cm² W.P. = 25 kg/cm²

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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 & WAINSKIN- OG SKIBSBYGGERI

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 18 Aug. - 1, 4, 8, 13, 17, 18, 28, 31, 1928. 9, 12, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 1928. 4, 10, 11, 18, 19, 20, 21, 27, 29, 30, 31, 1928. 3, 4, 11, 16, 19, Jan. 1929.
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. Pistons 15/4, 30/4, 11/12, 29/12, 28. Rods 1/9, 4/9, 20/9, 11/1, 15/2. Crank shaft 18/8, 9/9, 17/9, 12/10, 17/11, 28. Flywheel shaft 11/1, 15/2, 29. Thrust shaft Combined with the 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 1/2 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, and by 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 LMC - 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 : When applied for, 20.6.1929
4/5 Special ... £. 955.86 :
Donkey Boiler Fee ... £. : When received, 8.8.29
Travelling Expenses (if any) £. 1.50 :
Late fee £. 30.00 :
Committee's Minute FRI. 16 AUG 1929

Assigned see Minute on Kobe Rpt 6576

