

REPORT ON OIL ENGINE MACHINERY.

No. 8011

22 JUN 1929

Received at London Office

Writing Report 19th June 1929 When handed in at Local Office

Port of Copenhagen

Survey held at Copenhagen

Date, First Survey 11th Aug 1928 Last Survey 1st June 1929

Number of Visits 52.

on the ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Single Screw vessel

(MITSUI 10.)

Tons Gross Net

Yama Japan

By whom built Messrs Mitsui Bussan Kaisha

Yard No. 159. When built

made at Copenhagen

By whom made Askin of Skibstageri

Engine No. 158/ When made 1929

Boilers made at

By whom made

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 (Solid injection) 2 or 4 stroke cycle 4 Single or double acting Single

m 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

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

ons per minute 140 Turning Flywheel dia. 1362 mm Weight 435 kg. Means of ignition Air compression Kind of fuel used Diesel oil flash point 150° F.

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

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

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

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

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

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

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

rication Thickness 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

g 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 trunk 150 mm Stroke 175 mm Can one be overhauled while the other is at work Yes

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

10 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

No. and size: In Machinery Spaces

ds, &c.

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

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

n 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

y 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

y 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

ipes pass through the bunkers How are they protected

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

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

rrangement 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

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

od 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 170 mm Driven by

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

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

nging Air Pumps, No. Diameter Stroke Driven by

ary 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

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

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

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

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

s, lap welded or riveted longitudinal joint Lap welded Material S.M. Steel Range of tensile strength 38.8 kg/mm² Working pressure by Rules 3.7 kg/cm²

W1320-0783

If so, is a report now forwarded?

Crank shafts

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements.

Oil Fuel Burning Arrangements

SPARE GEAR

as per accompanying list.

The foregoing is a correct description,

BURMEISTER & WAIN'S MASKIN- OG SKIBSBYGGERI

Manufacturer.

Dates of Survey while building { During progress of work in shops - 11, 14, 18 Aug - 1, 8, 17, 20 Sept. - 8, 24, 26, 29, 30 Oct. - 1, 6, 7, 9, 10, 13, 15, 16, 22, 23, 24, 26, Nov. - 4, 10, 11, 13, 17, 18, 27, 29 Dec. 1928 - 3, 4, 11, 19 Jan. - 13, 15, 21, 27 Feb. - 1, 2, 7, 11, 13, 15, 18 March - 14, 20 April - 4, 28 May, 1 June 1929.
During erection on board vessel - - -
Total No. of visits 52.

Dates of Examination of principal parts—Cylinders ^{18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100} and Covers ^{10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100} Pistons ^{10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100} Rods ^{10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100} Connecting rods ^{10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100}

Crank shaft $11\frac{1}{2}$ 15/2.20. Flywheel shaft ✓ Thrust shaft ~~combined with the~~ 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) *aluminum* Identification Mark *LOYDSEN 7691 Q 9-11-28* Flywheel shaft, Material *aluminum* Identification Mark *LOYDSEN 7691 Q 9-11-28*

combined
Thrust shaft Material Wipe 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
 1 main and auxiliary engines with their accessories until the running test under full power working condition 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 the air receiver have been tested as required by the Rules, either 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 Secretary's letter E. dated the 16th July 1928.

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

The ^{4/5} amount of Entry Fee ... ~~4/5~~ 58.24

When applied for,

4/5 Special *Fr. 955.86*

20. 6. 19

Donkey Boiler Fee ... £ :

When received,

Committee's Minute

Assigned See Minute on

1 Cole R/H 65.36

A.C. Fruech. Klausen.
Engineer Surveyor to Lloyd's Register of Shipping.

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Foundation