

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 9468

-1 MAY 1936

Received at London Office

Date of writing Report 3rd April 1936 When handed in at Local Office 13th April 1936 Port of KOBE.No. in Survey held at KOBE Date, First Survey March 8th 1935 Last Survey 2nd March 1936

Reg. Book. on the Single Triple Screw vessel "KINUGASA MARU" Tons { Gross 6808 Net 3717

Built at KOBE By whom built KAWASAKI DOCKYARD Co. LTD. Yard No. 591 When built 1936.

Engines made at KOBE By whom made KAWASAKI DOCKYARD Co. LTD. Engine No. 221 When made 1936.

Donkey Boilers made at KOBE By whom made KAWASAKI DOCKYARD Co. LTD. Boiler No. When made 1936.

Brake Horse Power 7000 Owners KOKUSAI KISEN KAB. KAISHA Port belonging to TOKYO

Nom. Horse Power as per Rule 2187 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

Trade for which vessel is intended FOREIGN.

IL ENGINES, &c.—Type of Engines KAW-MAN. DTZ 7¹/₂ 120 HEAVY OIL 2 or 4 stroke cycle 2 Single or double acting DoubleMaximum pressure in cylinders 45 kg/cm² Diameter of cylinders 700 mm Length of stroke 1200 mm No. of cylinders 7 No. of cranks 7

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1090 mm Is there a bearing between each crank yes

Revolutions per minute 120 Flywheel dia. 2100 mm Weight 3100 KGS. Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 473 mm as fitted 500 mm Crank pin dia. 500 mm Crank Webs Mid. length breadth 790 mm Thickness parallel to axis 320 mm

Flywheel Shaft, diameter as per Rule 473 mm as fitted 500 mm Intermediate Shafts, diameter as per Rule 398 mm as fitted 405 mm Thrust Shaft, diameter at collars as per Rule 435 mm as fitted 460 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 440 mm as fitted 446 mm Is the tube screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule 21.2 mm as fitted 24 mm Thickness between bushes as per rule 16 mm as fitted 19 mm Is the after end of the liner made watertight in the

propeller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Continuous

If 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 tight fit

If 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

haft no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 2445 mm

Propeller, dia. 18'-0" Pitch 13'-0" No. of blades 4 Material BRONZE whether Moveable yes Total Developed Surface 100 sq. feet

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

forced Thickness of cylinder liners 40 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material yes 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. 2 Independent sea water & I.F.W. + I.S.W. port service pump. Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Bilge Pumps worked from the Main Engines, No. NONE Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size 1 @ 250 TONS/HR, 1 @ 100 TONS/HR, 1 @ 30 TONS/HR

How driven All by Electric motors

Ballast Pumps, No. and size 1 @ 250 TONS/HR, 1 @ 100 TONS/HR Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 70 TONS/HR EACH

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

Pumps, No. and size:—In Machinery Spaces 4 @ 90 mm, 2 @ 140 mm

In Holds, &c. Nos. 1, 2, 3, 5 & 6 holds, 2 @ 90 mm in each; 4 deep tanks in No. 4 hold, 1 @ 90 mm in each tank.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 90 mm, 1 @ 150 mm, 1 @ 200 mm, 2 emergency @ 200 mm

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

and from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Suction roses & strainers fitted

Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes Are the Overboard Discharges above or below the deep water line above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

What pipes pass through the bunkers none How are they protected

What pipes pass through the deep tanks none 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 yes

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

compartment to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from E.R. casing.

If 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. NONE No. of stages Diameters Stroke Driven by Elec. motor

Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 100/350/295 Stroke 200 mm Driven by 1 aux. engine

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 38/89 mm Stroke 60 mm Driven by 24 P. pas. engine

Scavenging Air Pumps, No. 1 tandem type Diameter 1800 mm Stroke 1000 mm Driven by Main Engine

Auxiliary Engines crank shafts, diameter as per Rule 161 mm as fitted 170 mm

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes Access by manhole & steam connection

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

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

High Pressure Air Receivers, No. NONE Cubic capacity of each Internal diameter thickness

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

Starting Air Receivers, No. 2 Total cubic capacity 28 cub. metres Internal diameter 2000 mm thickness 1 5/16

Seamless, lap welded or riveted longitudinal joint T.R.D.B.S. Material Steel Range of tensile strength 44-50 Working pressure by Rules 30 kg/cm²

IS A DONKEY BOILER FITTED?

yes.

If so, is a report now forwarded?

yes.

PLANS. Are approved plans forwarded herewith for Shafting

25/6/35 + 6/2/35

Receivers

9/7/35.

Separate Tanks

20/8, 20/9 + 1/10/35

Donkey Boilers

20/8/35.

General Pumping Arrangements

22/8/35.

Oil Fuel Burning Arrangements

11/9/35.

SPARE GEAR In accordance with the requirements of the Rules + the following are the more important additional items supplied:-

1 Screw shaft, 2 propeller blades, 1 complete thrust ring, 10 pads for thrust block, 2 piston rods, 1 pair camshaft driving gear wheels, Top + bottom end + main bearing bushes, 1 set of each, 1 upper + 1 lower cylinder liner, + Scavenging Pump bottom end + main bearing bushes.



The foregoing is a correct description,

Manufacturer.

T. Chino



Dates of Survey while building
During progress of work in shops - 1935 March, 8, 14, 15, 16, 18, 19, 20, 22, 25, 27, 29. Apr. 1, 5, 8, 10, 12, 13, 15, 17, 19, 23, 27, May, 1, 3, 4, 7, 8, 9, 10, 11, 13, 14, 15, 17, 20, 22, 24, 27, 29, 31. June, 3, 6, 7, 11, 12, 14, 15, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28. Jul. 1, 3, 5, 8, 10, 12, 13, 15, 18, 19, 22, 26, 27, 28, 29, 30. Aug. 2, 5, 7, 9, 12, 14, 16, 19, 21, 23, 26, 29, 30. Sept. 2, 3, 9, 10, 11, 16, 18, 27, 28, 30. Oct. 1, 4, 5, 7, 8, 15, 16, 18, 21, 23, 24, 25, 26, 27, 28, 29, 30. Nov. 2. During Erection on board. 4, 6, 8, 9, 11, 12, 13, 16, 18, 19, 20, 22, 27, 30. Dec. 5, 9, 12, 18, 19, 20, 21, 1936. Jan. 9, 15, 22, Feb. 2, 5, 6, 8, 15, 20, 21, 22, 24, 25, 26, 28, Mar. 2nd.
Total No. of visits 145 visits.

Dates of Examination of principal parts—Cylinders 2/11/35 Covers 4/11/35 Pistons 30/9/35 Rods 15/10/35 Connecting rods 1/10/35

Crank shaft 11/10/35 Flywheel shaft 23/10/35 Thrust shaft 5/12/35 Intermediate shafts 5/12/35 Tube shaft ✓

Screw shaft 12/12/35 Propeller 12/12/35 Stern tube 5/12/35 Engine seatings 4/11/35 Engines holding down bolts 9/12/35

Completion of fitting sea connections 20/12/35 Completion of pumping arrangements 2/2/36 Engines tried under working conditions 13/2/36

Crank shaft, Material F.S.M.S. Identification Mark 1199 Flywheel shaft, Material F.S.M.S. Identification Mark 4768

Thrust shaft, Material F.S.M.S. Identification Mark 4580 Intermediate shafts, Material F.S.M.S. Identification Marks 4676

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material F.S.M.S. Identification Mark 4680

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 yes.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo yes. If so, have the requirements of the Rules been complied with yes.

Is this machinery duplicate of a previous case no. If so, state name of vessel ✓

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

This machinery has been constructed under Special Survey in accordance with the Rules + approved plans.

The materials + workmanship are good.

On completion the machinery was installed in the vessel in accordance with the Rules afterwards tested under full working conditions + is eligible in our opinion for classification with the record of + LMC 2.36, Oil Engine, D.B. 10076 per sq. inch + T.S. (C.L.) 2.36.

The amount of Entry Fee ... £ 6.-

Special ... £ 193-16 10

When applied for,

Mar. 2nd 1936

Donkey Boiler Fee

Travelling Expenses (if any)

When received,

Mar. 17th 1936

Committee's Minute

FRI. 15 MAY 1936

Assigned

+ Lmb. 3.36 Oil Eng. C.F. L.B. - 10076

C. Macpherson & Yamada

Engineer Surveyor to Lloyd's Register of Shipping.



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