

REPORT ON OIL ENGINE MACHINERY.

Addition the Rpt.
No. 3026

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Date of writing Report 19 When handed in at Local Office 19 Port of KOBE
No. in Survey held at Kobe, Japan Date, First Survey 17th Nov., 1954 Last Survey 20th July, 1955
Reg. Book. Number of Visits
Single on the Twin Screw vessel M.V. "HIKAWA MARU" Tons Gross 8092.32
Net 5600.79
Built at Kobe, Japan By whom built Kawasaki Dockyard Co., Ltd., Kobe Yard No. 940 When built July, '55.
Engines made at Kobe, Japan By whom made Kawasaki Dockyard Co., Ltd., Kobe Engine No. 1175 When made July, '55.
Donkey Boilers made at Kobe, Japan By whom made Kawasaki Dockyard Co., Ltd., Kobe Boiler No. 1200 When made July, '55.
Brake Horse Power 5490 Owners Nippoh Kaiun K.K., & Kawasaki Kisen K.K. Port belonging to Kobe, Japan.
M.N. Power as per Rule 1098 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted
Trade for which vessel is intended Ocean going.

MIL ENGINES, &c.—Type of Engines 2 or 4 stroke cycle Single or double acting
Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks
Mean Indicated Pressure Ahead Firing Order in Cylinders Span of bearings, adjacent to the crank, measured from inner edge to inner edge Is there a bearing between each crank Revolutions per minute
Flywheel dia. Weight Moment of inertia of flywheel (lbs. in² or Kg. cm.²) Means of ignition Kind of fuel used
Crank Shaft, (Solid forged dia. of journals as per Rule Crank pin dia. Crank webs Mid. length breadth Thickness parallel to axis.
Semi built as fitted Crank webs Mid. length thickness shrunk Thickness around eyehole.
All built as fitted
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted
Tube 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
Bronze Liners, 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 propeller boss.
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner.
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.
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 tube shaft.
If so, state type Length of bearing in Stern Bush next to and supporting propeller.
Propeller, dia. Pitch No. of blades Material whether moveable Total developed surface sq. feet
Moment of inertia of propeller (lbs. in² or Kg. cm.²) Kind of damper, if fitted
Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with non-conducting material.
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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.
Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work.
Pumps connected to the Main Bilge Line (No. and size How driven
Is the cooling water led to the bilges. If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements.
Ballast Pumps, No. and size Power Driven Lubricating Oil Pumps, including spare pump, No. and size.
Are two 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 In pump room.
In holds, &c.
Independent Power Pump Direct Suctions to the engine room bilges, No. and size.
Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges.
Are all Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed efficiently 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 they 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.
What pipes pass through the bunkers How are they protected.
What pipes pass through the deep tanks 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.
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 Is the shaft tunnel watertight Is it fitted with a watertight door worked from.
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. No. of stages diameters stroke driven by.
Auxiliary Air Compressors, No. No. of stages diameters stroke driven by.
Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by.
What provision is made for first charging the air receivers.
Savenging Air Pumps, No. diameter stroke driven by.
Auxiliary Engines crank shafts, diameter as per Rule as fitted No. Position.
Have the auxiliary engines been constructed under special survey Is a report sent herewith.

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AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....
Is each receiver, which can be isolated, fitted with a safety valve as per Rule.....
Can the internal surfaces of the receivers be examined and cleaned..... Is a drain fitted at the lowest part of each receiver.....

Injection Air Receivers, No...... Cubic capacity of each..... Internal diameter..... thickness.....
Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....
Starting Air Receivers, No...... Total cubic capacity..... Internal diameter..... thickness.....
Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

IS A DONKEY BOILER FITTED..... If so, is a report now forwarded.....

Is the donkey boiler intended to be used for domestic purposes only.....

PLANS. Are approved plans forwarded herewith for shafting..... Receivers..... Separate fuel tanks.....
(If not, state date of approval)
Donkey boilers..... General pumping arrangements..... Pumping arrangements in machinery space.....
Oil fuel burning arrangements.....
Have Torsional Vibration characteristics been approved..... Date of approval.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied.....

State the principal additional spare gear supplied.....

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops - -
During erection on board vessel - -
Total No. of visits.....

Dates of examination of principal parts—Cylinders..... Covers..... Pistons..... Rods..... Connecting rods.....
Crank shaft..... Flywheel shaft..... Thrust shaft..... Intermediate shafts..... Tube shaft.....
Screw shaft..... Propeller..... Stern tube..... Engine seatings..... Engine holding down bolts.....
Completion of fitting sea connections..... Completion of pumping arrangements..... Engines tried under working conditions.....
Crank shaft, material..... Identification mark..... Flywheel shaft, material..... Identification mark.....
Thrust shaft, material..... Identification mark..... Intermediate shafts, material..... Identification marks.....
Tube shaft, material..... Identification mark..... Screw shaft, material..... Identification mark.....
Identification marks on air receivers.....

Welded receivers, state Makers' Name.....

Is the flash point of the oil to be used over 150°F.....

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with.....

Description of fire extinguishing apparatus fitted.....

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.....

If the notation for ice strengthening is desired, state whether the requirements in this respect have 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, Speed restrictions, &c.....)

Exhaust Gas Economizer:-

The Exhaust Gas Economizer of this vessel has been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.

The materials and workmanship are sound and good. (See attached Cert.No.M-24144).

The crankcase explosion relief divers have been fitted as per Rules to the main and aux., engines.

Amount of Entry Fee ... £ : :
Special ... £ : : When applied for 19
Donkey Boiler Fee... £ : : When received 19
Travelling Expenses (if any) £ : :
Committee's Minute

Assigned See Rph. 46. TUESDAY 10 JAN 1956

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation