

REPORT ON OIL ENGINE MACHINERY.

No. 4298.

26 MAR 1929

Date of writing Report 25 February 29 When handed in at Local Office

Port of YOKOHAMA

No. in Survey held at Kamata

Date, First Survey 7th September 1928 Last Survey 20th February 1929

Number of Visits 5

on the Single } Screw vessels ✓
Twin }
Triple }

Chichibu Mann.

Tons { Gross 16500
Net ✓

Master ✓ Built at ✓ By whom built ✓ Yard No. ✓ When built ✓
Engines made at Kamata By whom made Kingata Tekkocho Engine No. 1545 When made 1929
Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
Brake Horse Power 150 ✓ Owners For Yokohama Dock Bldg Yard No 140 Port belonging to ✓
Nom. Horse Power as per Rule ✓ Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

MAIN ENGINES, &c.—Type of Engines L 6 R 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 550 lb per square inch No. of cylinders 6 No. of cranks 6 main Diameter of cylinders 9"

Length of stroke 12" ✓ Revolutions per minute 350 Means of ignition Compression Kind of fuel used Heavy oil

Is there a bearing between each crank yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 11 1/2" ✓

Distance between centres of main bearings 16 3/4" Is a flywheel fitted yes Diameter of crank shaft journals as per Rule 5.08" ✓

Diameter of crank pins 5.3125" ✓ Breadth of crank webs as per Rule as fitted Thickness of ditto as per Rule 4.06" ✓

Diameter of flywheel shaft as per Rule as fitted Diameter of tunnel shaft as per Rule as fitted Diameter of thrust shaft as per Rule as fitted

Diameter of screw shaft as per Rule as fitted Is the screw shaft fitted with a continuous liner the whole length of the stern tube ✓

Is the after end of the liner made watertight in the propeller boss ✓ If the liner is in more than one length are the joints burned ✓

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 ✓ If without liners, is the shaft arranged to run in oil ✓

Type of outer gland fitted to stern tube ✓ Length of stern bush ✓ Diameter of propeller ✓

Pitch of propeller ✓ No. of blades ✓ state whether moveable ✓ Total surface ✓ square feet

Method of reversing ✓ Is a governor or other arrangement fitted to prevent racing of the engine when declutched ✓ Thickness of cylinder liners ✓

Are the cylinders fitted with safety valves yes Means of lubrication Forced. Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material Exhaust pipes lagged. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓

No. of cooling water pumps one Is the sea suction provided with an efficient strainer which can be cleared

within the vessel ✓ No. of bilge pumps fitted to the main engines ✓ Diameter of ditto ✓ Stroke ✓

Can one be overhauled while the other is at work ✓ No. of auxiliary pumps connected to the main bilge lines ✓ How driven ✓

Sizes of pumps ✓ No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room ✓

and in holds, etc. ✓ No. of ballast pumps ✓ How driven ✓ Sizes of pumps ✓

Is the ballast pump fitted with a direct suction from the engine room bilges ✓ State size ✓ Is a separate auxiliary pump suction fitted in

Engine Room and size ✓ Are all the bilge suction pipes fitted with roses ✓ Are the roses in Engine Room always accessible ✓

Are the sluices on Engine Room bulkheads always accessible ✓ Are all connections with the sea direct on the skin of the ship ✓

Are they valves or cocks ✓ Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates ✓

Are the discharge pipes above or below the deep water line ✓ Are they each fitted with a discharge valve always accessible on the plating of the vessel ✓

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times ✓ Are the bilge suction pipes, cocks and valves arranged so as to prevent any

communication between the sea and the bilges ✓ Is the screw 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 ✓

No. of main air compressors One No. of stages 2 Diameters 2 3/8" & 8 3/8" Stroke 6.25" Driven by Crank shaft

No. of auxiliary air compressors ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

No. of small auxiliary air compressors ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

No. of scavenging air pumps ✓ Diameter ✓ Stroke ✓ Driven by ✓

Diameter of auxiliary Diesel Engine crank shafts as per Rule as fitted Are the air compressors and their coolers made so as to be easy of access ✓

AIR RECEIVERS:—No of high pressure air receivers One Internal diameter 191 mm Cubic capacity of each 21.8 litre

material Mild Steel Seamless, lap welded or riveted longitudinal joint Seamless Range of tensile strength

thickness 9.5 mm working pressure by Rules 1170 lb per sq inch No. of starting air receivers 2 Internal diameter 296 mm

Total cubic capacity 137.5 litre Material mild steel Seamless, lap welded or riveted longitudinal joint Seamless

Range of tensile strength thickness 11 mm Working pressure by rules 910 lb per sq inch Is each receiver, which can be isolated,

fitted with a safety valve as per Rule yes Can the internal surfaces of the receivers be examined no. What means are provided for cleaning their

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

IS A DONKEY BOILER FITTED? ✓

If so, is a report now forwarded? ✓

HYDRAULIC TESTS:-

| DESCRIPTION. | DATE OF TEST. | WORKING PRESSURE. | TEST PRESSURE. | STAMPED. | REMARKS. |
|----------------------------|--------------------------------|-------------------|----------------|--|--|
| ENGINE CYLINDERS | 7 th November 1928 | 550 lb. | 1,100 lb. | Lloyd's Test W.P. 1100 lb. 7-11-28 | Certificates for air receivers & air injection bottles dated |
| " " COVERS | 7 th November 1928 | 550 lb. | 1,100 lb. | " " " " | " " " " |
| " " JACKETS | 19 th November 1928 | 7 lb. | 30 lb. | Jacket W.P. 30 lb. 19-11-28 | " " " " |
| " " PISTON WATER PASSAGES | 19 th November 1928 | | | " " " " | " " " " |
| MAIN COMPRESSORS—1st STAGE | 19 th November 1928 | 120 lb. | 400 lb. | R S | Dusseldorf 19-8-24 |
| " 2nd " | 19 th November 1928 | 1,000 lb. | 2,000 lb. | R S | 31-8-24 |
| " 3rd " | | | | | Mark on bottles |
| AIR RECEIVERS—STARTING | | | | | No 3459352 |
| " INJECTION | | | | | LLOYD'S TEST 3000 lb. W.P. 1200 lb. |
| AIR PIPES | 6 th December 1928 | 1,000 lb. | 2,000 lb. | R S | FK 17-8-28 |
| FUEL PIPES | 6 th December 1928 | 1,000 lb. | 2,000 lb. | R S | No 4 |
| FUEL PUMPS | | | | | LLOYD'S TEST 2996 lb. |
| SILENCER | | | | | W.P. 120 lb. |
| " WATER JACKET | | | | | P.K. 27-7-27 |
| SEPARATE FUEL TANKS | | | | | |

PLANS. Are approved plans forwarded herewith for shafting No. Approved Koles 1-28 Receivers ✓ Separate Tanks ✓
(If not, state date of approval)

SPARE GEAR Set of studs and nuts for cylinders. Piston, packing rings & gudgeon pin. 3 sets of packing rings. One set of crank shaft coupling bolts. One set of bearings for top & bottom ends. One set of main bearing bolts. Six air exhaust valves. Two exhaust valve seats. Six exhaust valve springs. One starting air valve. One fuel valve. Three fuel valves. One flame plate. One cylinder safety valve. One set of fuel pump valves. One fuel pump complete. One lubricating oil valve. One set of piston rings for air compressor. One set of air valve and seats for compressor. One set of valves for cooling water pump. One set of bearing brass for gudgeon pin and crank for air compressor. Two air bottle valves. Various lengths of pipes for fuel, air injection and delivery, and number of springs.

The foregoing is a correct description,

Shigeo Kato,

Manufacturer. Niigata Engineering Works,

Dates of Survey while building { During progress of work in shops - 7-9-28, 7-11-28, 19-11-28, 6-12-28, 20-2-29
During erection on board vessel - ✓
Total No. of visits 5.

Dates of Examination of principal parts—Cylinders 7-11-28 Covers 7-11-28 Pistons 19-11-28 Rods - Connecting rods 7-9-28
Crank shaft 7-11-28 Thrust shaft ✓ Tunnel shafts ✓ Screw shaft ✓ Propeller ✓ Stern tube ✓ Engine seatings ✓
Engines holding down bolts ✓ Completion of pumping arrangements ✓ Engines tried under working conditions 20-2-29.
Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓
Material of crank shaft Mild Steel Identification Mark on Do. No 1515 LLOYD'S No 30528 7/1 F.B.S 7-11-28 Material of thrust shaft ✓ Identification Mark on Do. ✓
Material of tunnel shafts ✓ Identification Marks on Do. ✓ Material of screw shafts ✓ Identification Marks on Do. ✓

Is the flash point of the oil to be used over 150° F. Yes.
Is this machinery duplicate of a previous case Yes. If so, state name of vessel See Jha Report No 4225.

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been constructed under Special Survey in accordance with approved plans and Rules requirements. The workmanship and materials, so far as can be seen, are good, and satisfactory bench trials have been carried out under Survey. This engine is to be installed in Yokohama Dock Co Ship No 170 and in my opinion will be eligible for inclusion in the classification and record of LMC of the vessel.

The amount of Entry Fee ... £ 260⁰⁰ : 28-2-1929
Special ...
Donkey Boiler Fee ... £ 20⁰⁰ :
Travelling Expenses (if any) £ 20⁰⁰ : 7-5-1929

Committee's Minute

Assigned

J. Brooke Smith

Engineer Surveyor to Lloyd's Register of Shipping.

st. 9a.

rt of Yokohama.

Continuation of Report No.

dated

on the

M.V. "CHICHIBU MARU"

These engines and auxiliaries have been securely fitted on board this vessel under special survey at Yokohama. Materials and workmanship good. On completion of fitting out all main and auxiliary engines were examined under full working conditions with satisfactory results.

It is recommended that this vessel has the notation in the Register Book of LMC. 3-30. and the notation of Oil Engines.

J. Michels.

YOKOHAMA.

The amount of ENTRY FEE. 1/5 = YEN. 12.00 ✓
1/5 SPECIAL. YEN. 806.00
DONKEY BOILERS. YEN. 202.00
TRAVELLING EXPENSES. YEN. 65.00
FEE APPLIED FOR 4-4-30
Paid 24/4/30 C.C.

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



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Lloyd's Register

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