

REPORT ON OIL ENGINE MACHINERY.

No. 6246

Received at London Office

11 OCT 1928

Date of writing Report 6-9-1928 When handed in at Local Office

Port of KOBE.

No. in Survey held at Reg. Book.

Yama.

Date, First Survey 12-6-28.

Last Survey

3-9-1928.

Number of Visits

18

Single
on the Twin
Triple
Quadruple

Screw vessel

"TAIHEI MARU"

Tons

Gross 6285.

Net 3835.

Built at

Yama.

By whom built

Mitsui Bussan Kaisha.

Yard No. 146

When built 1928

Engines made at

Copenhagen.

By whom made

Burmester & Wain.

Engine No. 146

When made 1927-28.

Donkey Boiler made at

Yama.

By whom made

Mitsui Bussan Kaisha.

Boiler No. 146

When made 1928.

Brake Horse Power

2,100

Owners

Shumitani Kisen K. Kaisha.

Port belonging to

Kobe.

Nom. Horse Power as per Rule

473.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

YES.

Trade for which vessel is intended

JAPAN - USA.

OIL ENGINES, &c.—Type of Engines

2 or 4 stroke cycle

Single or double acting

Maximum pressure in cylinders

See Copenhagen Report No 7716.

Length of stroke

No. of cylinders

No. of cranks

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

Means of ignition

Kind of fuel used

Crank Shaft, dia. of journals

as per Rule

Crank pin dia.

Crank Webs

Mid. length breadth

shrink

Thickness parallel to axis

Flywheel Shaft, diameter

as per Rule

Intermediate Shafts, diameter

as per Rule

11'8"

Thrust Shaft, diameter at collars

as per Rule

Tube Shaft, diameter

as per Rule

Screw Shaft, diameter

as per Rule

13'05"

Is the shaft fitted with a continuous liner

YES.

Bronze Liners, thickness in way of bushes

as per Rule

7"

Thickness between bushes

as per Rule

52"

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

YES.

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

YES.

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 shaft

No.

Length of Bearing in Stern Bush next to and supporting propeller

5'-8"

Propeller, dia.

14'-3"

Pitch

10'-9"

No. of blades

FOUR.

Material

BRONZE

whether Moveable

No.

Total Developed Surface

64.1 sq. feet

Method of reversing Engines

DIRECT

Is a governor or other arrangement fitted to prevent racing of the engine when detached

YES.

Means of lubrication

FORCED FEED. Thickness of cylinder liners

44 1/2".

Are the cylinders fitted with safety valves

YES.

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting 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

YES.

Cooling Water Pumps, No. One 120 ton.

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. TWO.

Diameter

160 1/2".

Stroke

234 1/2".

Can one be overhauled while the other is at work

YES.

Pumps connected to the Main Bilge Line

No. and Size

One 150 ton.

One 20 ton.

Two 160 1/2" x 234 1/2".

How driven

Electric motor except 160 1/2" x 234 1/2" which is driven by main engine.

Ballast Pumps, No. and size

One 150 ton.

Lubricating Oil Pumps, including Spare Pump, No. and size

Two 45 ton.

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

Three 3" (ER bilge)

one 3" (offordam)

one 3" (tunnel well)

In Holds, &c. No 1 hold, two 3 1/2", No 2 hold, two 3 1/2", No 3 hold, two 3 1/2", No 4 hold, two 3 1/2", FOREPEAK TANK TOP, two 1 1/2" to Land pump.

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

One 3", One 5"

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

YES.

Are the Bilge Suctions 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

YES.

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

FOREPEAK, NO 102 HOLD, BILGE & FORD DEEP TANK

How are they protected

YES.

What pipes pass through the deep tanks

SUCTIONS.

Have they been tested as per Rule

YES.

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 UPPER DECK LEVEL.

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

YES.

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

Scavenging Air Pumps, No.

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined

What means are provided for cleaning their inner surfaces

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

High Pressure Air Receivers, No.

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.

Two.

Total cubic capacity

420 cu. ft.

Internal diameter

6'-8"

Thickness

1 1/8" ends 1 3/8"

Seamless, lap welded or riveted longitudinal joint

Riveted

Material

0.45%

Range of tensile strength

28-32T

Working pressure by Rules

372 1/2 psi

372 1/2 psi

IS A DONKEY BOILER FITTED? YES.

If so, is a report now forwarded? YES.

PLANS. Are approved plans forwarded herewith for Shafting 19-1-28.
(If not, state date of approval)

Receivers 7-2-28.

Separate Tanks 14-3-28.

Donkey Boiler 4-2-28.

General Pumping Arrangements 29-11-27.

Oil Fuel Burning Arrangements 14-3-28.

SPARE GEAR As per list attached to Copenhagen Report No 7716, & in addition one set of six intermediate shaft coupling bolts.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1928, JUNE, 7, 12, 26, JULY, 4, 5, 9, 13, 20, 18, 24, 31, AUG, 9.
During erection on board vessel - 1928, JULY, 9, 13, 19, 24, 31, AUG, 3, 6, 21, 29, SEPT 3.
Total No. of visits 18.

Dates of Examination of principal parts—Cylinders X Covers X Pistons X Rods X Connecting rods X

Crank shaft X Flywheel shaft X Thrust shaft X Intermediate shafts 21-8-28 Tube shaft X

Screw shaft 4-7-28 Propeller 4-7-28 Stern tube 7-6-28 Engine seatings 9-7-28 Engines holding down bolts 18-7-28

Completion of fitting sea connections 21-8-28 Completion of pumping arrangements 29-8-28 Engines tried under working conditions 29-8-28

Crank shaft, Material X Identification Mark X Flywheel shaft, Material X Identification Mark X

Thrust shaft, Material X Identification Mark X Intermediate shafts, Material O.H.S.N. Identification Marks Nº 1411. 9-6-28

Tube shaft, Material X Identification Mark X Screw shaft, Material O.H.S.N. Identification Mark Nº 1416. 19-6-28

Is the flash point of the oil to be used over 150° F. YES. X See Copenhagen Report No 7716.

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.) The machinery described above has been securely installed aboard the vessel in accordance with the Rule requirements & approved plans.

The materials used are good & the workmanship employed up to standard. The machinery has been tested under working conditions with satisfactory results.

In my opinion the vessel is now entitled to the records of T.M.C. 9-28. T.S. (CL) New 9-28. OIL ENGINES. in the Register Book.

NOTE:- From Copenhagen Report No 7716 it is noted that 1/5 First Entry Fee has been charged.

The amount of Entry Fee ... 11 : - : When applied for,

1/5 Special ... 307 : - : 19

AIR RECEIVER ... 134 : - : When received,

Donkey Boiler Fee ... 134 : - : 5-11-1928

Travelling Expenses (if any) 0 : - : 19

Included in Hull Report.

Committee's Minute

Assigned

W. Kimber.
Engineer Surveyor to Lloyd's Register of Shipping.

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Foundation