

should be forwarded and a

port No. 450

No. 750

No. 775

h October, 1957.

tion and Profile

rt:-

gal

4U)

Rpt. 4b

Date of writing report

Survey held at

Nagasaki

Received London

In shops

No. of visits

On vessel

Port Nagasaki (Shimonoseki) FE 795

26-2-1957

First date 4-7-1957

Last date

10-9-1957

15-10-1957

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name M.V. "KOHOKU MARU" Gross tons 9,208

Owners Daido Kaiun K.K.

Managers

Port of Registry Kobe

Hull built at Nagasaki

Mitsubishi Zosen K.K.,

By Nagasaki Works

Yard No. 1497

Year Month
When 1957-10

Main Engines made at Nagasaki

Mitsubishi Zosen K.K.

By Nagasaki Works

Eng. No. 299

When 1957-10

Gearing made at

By

Donkey boilers made at Osaka

By Hirano Iron Works Co. Ltd.

Blr. Nos. H 662

When 1957-2

Machinery installed at Nagasaki

By Mitsubishi Zosen K.K., Nagasaki Works

When 1957-10

Particulars of restricted service of ship, if limited for classification

Particulars of vegetable or similar cargo oil notation, if required

Carrying Vegetable Oil in Deep Tanks in way of tunnel.

Is ship to be classed for navigation in ice? No

Is ship intended to carry petroleum in bulk? No

Is refrigerating machinery fitted? Yes

If so, is it for cargo purposes? Yes

Type of refrigerant Dichlorodifluoromethane

Is the refrigerating machinery compartment isolated from the propelling machinery space? No

Is the refrigerated cargo installation intended to be classed? Yes

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the wording is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines 1 No. of propellers 1 Brief description of propulsion system Direct coupled

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Mitsubishi Nagasaki Diesel Engine 6UEC 75/150 Type

No. of cylinders per engine 6 Dia. of cylinders 750mm stroke(s) 1,500mm 2 or 4 stroke cycle 2 Single or double acting Single

Maximum approved BHP per engine at 122 RPM of engine and 122 RPM of propeller.

Corresponding MIP 8.76 kg/cm² (For DA engines give MIP top & bottom) Maximum cylinder pressure 58 kg/cm² Machinery numeral 1,700

Are the cylinders arranged in Vee or other special formation? No

If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? No

If so, how are upper pistons connected to crankshaft?

Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? Valves

No. and type of mechanically driven scavenge pumps or blowers per

engine and how driven

No. of exhaust gas driven scavenge blowers per engine 2

Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action? Yes

If a stand-by or emergency pump or blower is fitted, state how driven by Electric Motor

No. of scavenge air coolers 2

Scavenge air pressure at full

power 0.35 kg/cm²

Are scavenge manifold explosion relief valves fitted? Yes

FOUR STROKE ENGINES. Is the engine supercharged? No

Are the undersides of the pistons arranged as supercharge pumps? No

No. of exhaust gas driven blowers per

engine

No. of supercharge air coolers per engine

Supercharge air pressure

Can engine operate without supercharger? No

TWO & FOUR STROKE ENGINES—GENERAL. No. of valves per cylinder: Fuel 1

Inlet

Exhaust 3

Starting 1

Safety 1

Material of cylinder covers Cast Iron

Material of piston crowns Cr. Mo Steel Forging

Is the engine equipped to operate on heavy fuel oil? Yes

Cooling medium for:—Cylinders F.W.

Pistons F.W.

Fuel valves F.W.

Overall diameter of piston rod for double acting engines

Is the rod fitted with a sleeve? No

Is welded construction employed for: Bedplate? No

Frames? No

Entablature? No

Is the crankcase separated from the

underside of pistons? Yes

Is the engine of crosshead or trunk piston type? Crosshead

Total internal volume of crankcase 85.32M²

No. and total area of explosion relief

devices 6x1653.9cm²

Are flame guards or traps fitted to relief devices? Yes

Is the crankcase readily accessible? Yes

If not, must the engine be removed for

overhaul of bearings, etc? No

Is the engine secured directly to the tank top or to a built-up seating? to Tank Top

How is the engine started? by Compressed Air

Can the engine be directly reversed? Yes

If not, how is reversing obtained?

Has the engine been tested working in the shop? Yes

How long at full power? 2 hours

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 20-12-56 28/11/57

State barred speed range(s), if imposed

for working propeller below 40r.p.m.

Is a governor fitted? Yes

Is a torsional vibration damper or detuner fitted to the shafting? No

Where positioned?

Type

No. of main bearings 8

Are main bearings of ball or roller

type? No

Distance between inner edges of bearings in way of crank(s) 1,020mm

Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which) Semi Built

Diameter of journals 560mm

Diameter of crankpins

Centre 560mm

Breadth of webs at mid-throw 890mm

Axial thickness of webs 350mm

If shrunk, radial thickness around eyeholes 242.5mm

Are dowel pins fitted? No

Crankshaft material Journals Steel Forging Approved 44 kg/mm²

Webs Steel Forging Tensile strength

Diameter of flywheel 2600mm

Weight 8,750 kgs

Are balance weights fitted? No

Total weight

Radius of gyration 1.081M

Diameter of flywheel shaft 560mm

Material Steel Forging

Minimum approved tensile strength 44 kg/mm²

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) integral with thrustshaft

012542-012548-02112

Lloyd's Register
Foundation

GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

The Machinery installation of this ship has been made under special survey in accordance with the requirements of the Rules, the approved plans and the Secretary's letters.

The materials and workmanship are sound and good.

The main engine was tested under full power condition in the shop and subsequent sea trial and found satisfactory.

The explosion relief devices have been fitted on crank cases of main & auxiliary heavy oil engines and on scavenge manifold of main engine.

The notice board of barred speed range has been fitted on manoeuvring gauge board of main engine.

Case 398 E

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping

PARTICULARS OF IDENTIFICATION MARKS ((Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

RODS Connecting Rods: LLOYD'S NAG NO. 1917-1 SM 14.5.57, LLOYD'S NAG NO. 1917-2 SM 14.5.57, LLOYD'S NAG NO. 1917-3 SM 14.5.57, LLOYD'S NAG NO. 1917-4 SM 14.5.57, LLOYD'S NAG NO. 1917-5 SM 14.5.57, LLOYD'S NAG NO. 1917-6 SM 14.6.57

Piston Rods:

CRANKSHAFT OR ROTOR SHAFT LLOYD'S NAG NO. 2079-F & F MO 25.5.1957

~~WHEEL SHAFT~~

THRUST SHAFT LLOYD'S NAG NO. 1714 MO 25.5.57

GEARING

INTERMEDIATE SHAFTS: LLOYD'S KOB NO. FS-F1269 JM 6.7.57, LLOYD'S KOB NO. FS-F1313 JM 6.7.57, LLOYD'S KOB NO. FS-F1310 SM 1.7.57, LLOYD'S KOB NO. FS-F1314 SM 1.7.57, LLOYD'S KOB NO. FS-F1317 SM 29.6.57, LLOYD'S KOB NO. FS-F1312 SM 29.6.57.

SCREW AND TUBE SHAFTS LLOYD'S KOB NO. SF-F1261 JM 6.7.57

PROPELLERS 2080 LLOYD'S NAG NO. 1699 B1 SM 30.5.57, LLOYD'S NAG NO. 1699 B2 SM 31.5.57, LLOYD'S NAG NO. 1699 B3 SM 30.5.57, LLOYD'S NAG NO. 1699 C1 SM 31.5.57, LLOYD'S NAG NO. 1699 C2 SM 31.5.57, LLOYD'S NAG NO. 1749 B SM 31.5.57

OTHER IMPORTANT ITEMS Crossheads: LLOYD'S NAG NO. 1851 WRDS 22.1.57, LLOYD'S NAG NO. 1852 WRDS 22.1.57, LLOYD'S NAG NO. 1853 WRDS 22.1.57, LLOYD'S NAG NO. 1854 KT 5.2.57, LLOYD'S NAG NO. 1855 KT 5.2.57, LLOYD'S NAG NO. 1856 WRDS 22.1.57, LLOYD'S NAG NO. 1857 KT 5.2.57, LLOYD'S NAG NO. 1858 KT 5.2.57, LLOYD'S NAG NO. 1859 KT 5.2.57, LLOYD'S NAG NO. 1860 WRDS 22.1.57, LLOYD'S NAG NO. 1861 WRDS 22.1.57, LLOYD'S NAG NO. 1862 WRDS 22.1.57, LLOYD'S NAG NO. 1863 KT 5.2.57, LLOYD'S NAG NO. 1864 KT 5.2.57, LLOYD'S NAG NO. 1865 KT 5.2.57, LLOYD'S NAG NO. 1866 KT 5.2.57

Is the installation a duplicate of a previous case? No If so, state name of vessel

Date of approval of plans for crankshaft 8-2-56 Straight shafting 28-12-55 Gearing - Clutch -

Separate oil fuel tanks 18-9-56 Pumping arrangements 14-1-57 Oil fuel arrangements 14-1-57

Cargo oil pumping arrangements - Air receivers 18-6-57 Donkey boilers 18-6-57

Dates of examination of principal parts:-

Fitting of stern tube 5-7-57 Fitting of propeller 8-7-57 Completion of sea connections 11-7-57 Alignment of crank shaft in main bearings 31-7-57

Engine checks & bolts 31-7-57 Alignment of gearing - Alignment of straight shafting 29-8-57 Testing of pumping arrangements 1-9-57

Oil fuel lines 19-9-57 Donkey boiler supports 4-7-57 Steering machinery 11-10-57 Windlass 11-10-57

Date of Committee TUESDAY 31 DEC 1957 Construction/Installation Special Survey Fee ₹855,000

Decision See Rpt. 1

Expenses See Rpt. 1