

Rpt. 4b

Date of writing report 29th May, 1962.

Received London

Port KOBE

No. FE-10175

Survey held at Aioi, Japan

In shops 196
No. of visits
On vessel 2713-3-1961
First date 25-1-196221-5-1962
Last date 24-5-1962

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name m.v. "LENKORAN"
Vsesojuznoje Exportno-Importnoje Objedinenije
Owners "Sudoimport" Moscow, U.S.S.R. Gross tons 23158.70

Hull built at Aioi, Japan Managers Ishikawajima-Harima Heavy Industries
By Co., Ltd., Aioi Works Port of Registry Odessa

Main Engines made at - Ditto - By - Ditto - Yard No. 592 Year Month
When 1962-5

Gearing made at - By - Eng. No. ID208 When 1962-5

Aux./boilers made at Aioi, Japan By Ishikawajima-Harima Heavy Ind. Gear No. When
Co., Ltd., Aioi Works Blr. Nos. B 2162, 2163 When 1962-5

Machinery installed at - Ditto - By - Ditto - When 1962-5

Particulars of restricted service of ship, if limited for classification Oil Tanker

Particulars of vegetable or similar cargo oil notation, if required No

If ship is to be classed for navigation in ice, state whether Class 1, 2 or 3 Yes, Class 3 Is ship an oil tanker? Yes

Is refrigerating machinery fitted? Yes If so, is it for cargo purposes? No Type of refrigerant Dichlorodifluoromethane

Is the refrigerating machinery compartment isolated from the propelling machinery space? Yes Is the refrigerated cargo installation intended to be classed? No

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 should 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 all other relevant particulars must be given and the port and report number should be stated.

No. of main engines 1 No. of propellers 1 Brief description of propulsion system Main Engine coupled with propeller through intermediate & tail shafts

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Crosshead Type, Airless Injection, Exhaust Turbo-charged, Direct Reversible, Marine Diesel Engine, Type 9RD90.

No. of cylinders per engine 9 Dia. of cylinders 900 mm. stroke(s) 1550 mm. 2 or 4 stroke cycle 2 Single or double acting Single

Maximum BHP per engine approved for this installation 18,000 at 119 RPM of engine and 119 RPM of propeller

Corresponding MIP 8.52 Kg/cm² (For DA engines give MIP top & bottom) Maximum cylinder pressure 69 Kg/cm² Machinery numeral 3,600

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? Ports No. and type of mechanically driven scavenge pumps or blowers per engine and how driven None

No. of exhaust gas driven scavenge blowers per engine 3 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 None No. of scavenge air coolers 3 Scavenge air pressure at full power 0.71 Kg/cm² Are scavenge manifold explosion relief valves fitted? Yes

TWO ~~STROKE~~ STROKE ENGINES. Is the engine supercharged? Yes Are the undersides of the pistons arranged as supercharge pumps? No No. of exhaust gas driven blowers per engine 3 No. of supercharge air coolers per engine 3 Supercharge air pressure 0.71 Kg/cm² Can engine operate without supercharger? Yes

No. of valves per cylinder: Fuel 1 Inlet None Exhaust None Starting 1 Safety 1

Material of cylinder covers Steel Casting Material of piston crowns Steel Casting Is the engine equipped to operate on heavy fuel oil? Yes

Cooling medium for: Cylinders Fresh Water Pistons Fresh Water Fuel valves Fresh Water Overall diameter of piston rod for double acting engines -

Is the rod fitted with a sleeve? - Is welded construction employed for: Bedplate? Yes Frames? Yes Entablature? Yes 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 157.5 M³ No. and total area of explosion relief devices 9 x 2,060 CM² 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? - Is the engine secured directly to the tank top or to a built-up seating? Tank Top How is the engine started? by compressed air

Can the engine be 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 31-8-61 502 W State barred speed range(s), if imposed for working propeller None For spare propeller None Is a governor fitted? Yes Is a torsional vibration damper or detuner fitted to the shafting? No

Where positioned? - Type - No. of main bearings 11 Are main bearings of ball or roller type? No Distance between inner edges of bearings in way of crank(s) 1,200 mm. 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 650 mm. Diameter of crankpins 650 mm. Breadth of webs at mid-throw 1037 mm. Axial thickness of webs 405 mm.

If shrunk, radial thickness around eyeholes 287.5 mm. Are dowel pins fitted? No Crankshaft material: Journals Steel Forging Pins Steel Forging Minimum 53.0 Kg/mm² Approved Tensile strength

Diameter of flywheel 2558 mm. Weight 1900 Kgs. Are balance weights fitted? Yes Total weight 793 Kgs. Radius of gyration 934 mm.

Diameter of flywheel shaft - Material - Minimum approved tensile strength -

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

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 give 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 main engine of this vessel has been built under Special Survey in accordance with the Rules, approved plans and the Secretary's letters.

The materials and workmanship are sound and good.

The machinery has been examined and tested under working condition during shop and sea trial and found satisfactory.

In our opinion this vessel's machinery is worthy to have records of +LMC 5.62
Engine Special Survey 5.62, Auxiliary Boiler Survey 16Kg/cm² 5.62, Tailshaft Survey -
Continuous Liner - 5.62, Steam Pipe Survey 5.62, "Fitted for Oil Fuel."

A. Jacobs & S. Matsumoto
Engineer Surveyors 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 Piston Rods: YKA No. Y17248A,B Y17255A,B Y17259 SM 4-12-61
Connecting Rods: YKA No. Y17249A,B Y17256C,D Y17232 Y17240A,B Y17254A,B SM 11-12-61
CRANKSHAFT OR ROTORSHAFT KOB No. KT-CK475 EI 9-11-61
FLYWHEEL SHAFT -
THRUSTSHAFT KOB No. KT-F 1746 EI 9-11-61
GEARING
INTERMEDIATE SHAFTS YKA No. Y 16675 AM 10-11-61
SCREW AND TUBE SHAFTS KOB No. KT F1774 EI 18-12-61 Spare: KOB No. KT-F1725 EI 30-9-61
PROPELLERS SMK No. 11878 KOI 22-1-62, Spare: SMK No. 12086 KOI 24-4-62
OTHER IMPORTANT ITEMS Cylinder Covers: KOB No. H-C866-2-1,3,4,5,6,7,8,9,10 SM 18-12-61
Piston Crowns: KOB No. H-C866-3-1,4,5,6,7,8,9,10 871-2-2 SM 7,8,9,11,12-12
Crossheads: KOB No. KT-F1627-1, 1641, 1652-1,2,3,4,5 1659-1,2, SM 30-11-61

Is the installation a duplicate of a previous case? Yes If so, state name of vessel m.v. "LISICHANSK" (Yard No. 591)
Date of approval of plans for crankshaft 6-2-61 Straight shafting 10-2-61 Gearing - Clutch -
Separate oil fuel tanks 5-10-61 Pumping arrangements 1-3-61 Oil fuel arrangements 1-3-61
Cargo oil pumping arrangements 1-3-61 Air receivers Main 19-4-61, Aux & GS 13-9-61 Aux. 1000K boilers 10-2-61
Dates of examination of principal parts:-
Fitting of stern tube 12-2-62 Fitting of propeller 14-2-62 Completion of sea connections 21-2-62 Alignment of crankshaft in main bearings 2-4-62
Engine chocks & bolts 2-4-62 Alignment of gearing - Alignment of straight shafting 11-4-62 Testing of pumping arrangements 20-4-62
Oil fuel lines 6-4-62 Donkey boiler supports 15-3-62 Steering machinery 7-5-62 Windlass 7-5-62

Date of Committee FRIDAY - 3 AUG 1962

Decision +LMCES
ABS
TS(CL) } 5.62
SPS

Special Survey Fee
Construction: £ 716,900.-
Installations: 392,000.-

Expenses

Date when A/c rendered

