

Rpt. 4b

Date of writing report 5th May 1962 Received London _____ Port Yokohama No. 4273
 Survey held at Tokyo No. of visits 4 In shops 4 First date 31st Jan. 1962 Last date 21st Feb., 1962
 On vessel _____

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. _____ Name _____ Gross tons _____
 Owners _____ Managers _____ Port of Registry _____ Year Month _____
 Hull built at _____ By Kanawa Dock Co., Ltd. Yard No. 129 When _____
 Main Engines made at Tokyo By Isuzu Motor Co., Ltd., and converted for marine use by Tokyo Boat Inc. Eng. No. 500248, 500250 When 1962 2
 Gearing made at Tokyo By Tokyo Boat Inc.
 Donkey boilers made at _____ By _____ Blr. Nos. _____ When _____
 Machinery installed at _____ By _____ When _____

Particulars of restricted service of ship, if limited for classification _____
 Particulars of vegetable or similar cargo oil notation, if required _____
 Is ship to be classed for navigation in ice? _____ Is ship intended to carry petroleum in bulk? _____
 Is refrigerating machinery fitted? _____ If so, is it for cargo purposes? _____ Type of refrigerant _____
 Is the refrigerating machinery compartment isolated from the propelling machinery space? _____ Is the refrigerated cargo installation intended to be classed? _____

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 2 No. of propellers 2 Brief description of propulsion system Oil Engine 4 SA 6 Cy. 120 x 150 mm
MAIN RECIPROCATING ENGINES. Licence Name and Type No. "Isuzu" Model DH100T-MF6RE TOBIN Marine Engine
 No. of cylinders per engine 6 Dia. of cylinders 120 mm stroke(s) 150 mm 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum approved BHP per engine 200 at 2100 RPM of engine and 830 RPM of propeller.
 Corresponding MIP 10.7 kg/cm² (For DA engines give MIP top & bottom) Maximum cylinder pressure 65 kg/cm² Machinery numeral 40
 Are the cylinders arranged in Vee or other special formation? No If so, number of crankshafts per engine _____

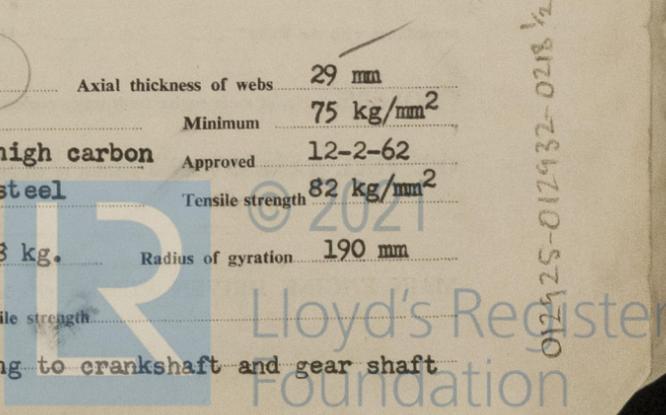
TWO STROKE ENGINES. Is the engine of opposed piston type? _____ If so, how are upper pistons connected to crankshaft? _____
 Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? _____ No. and type of mechanically driven scavenge pumps or blowers per engine and how driven _____
 No. of exhaust gas driven scavenge blowers per engine _____ Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action? _____
 If a stand-by or emergency pump or blower is fitted, state how driven _____ No. of scavenge air coolers _____ Scavenge air pressure at full power _____ Are scavenge manifold explosion relief valves fitted? _____

FOUR 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 1 No. of supercharge air coolers per engine 1 Supercharge air pressure 1.65 kg/cm² Can engine operate without supercharger? Yes

TWO & FOUR STROKE ENGINES--GENERAL. No. of valves per cylinder: Fuel 1 Inlet 1 Exhaust 1 Starting No Safety No
 Material of cylinder covers Cast iron Material of piston crowns Aluminum alloy Is the engine equipped to operate on heavy fuel oil? No
 Cooling medium for:—Cylinders Fresh water Pistons No Fuel valves No 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? No Is the engine of crosshead or trunk piston type? Trunk piston type. Total internal volume of crankcase 10,179 c.c. No. and total area of explosion relief devices _____ Are flame guards or traps fitted to relief devices? _____ Is the crankcase readily accessible? No If not, must the engine be removed for overhaul of bearings, etc? Yes Is the engine secured directly to the tank top or to a built-up seating? _____ How is the engine started? Electric motor starting
 Can the engine be directly reversed? No If not, how is reversing obtained? Reverse gear, cone and multi-disc clutch

Has the engine been tested working in the shop? Yes How long at full power? 100 hrs. continuous running test
CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 7th April 1962 State barred speed range(s), if imposed _____
 for working propeller _____ For spare propeller _____ Is a governor fitted? Yes Is a torsional vibration damper or detuner fitted to the shafting? _____
 Where positioned? _____ Type _____ No. of main bearings 7 Are main bearings of ball or roller type? No Distance between inner edges of bearings in way of crank(s) 121 mm Distance between centre lines of side cranks or eccentrics of opposed piston engines _____

Crankshaft type: Built, semi-built, solid. (State which) Solid
 Diameter of journals 92 mm Diameter of crankpins Centre 78 mm Breadth of webs at mid-throw 135 mm Axial thickness of webs 29 mm
 If shrunk, radial thickness around eyeholes _____ Are dowel pins fitted? No Crankshaft material Journals high carbon Minimum 75 kg/mm²
 Webs steel Approved 12-2-62 Tensile strength 82 kg/mm²
 Diameter of flywheel 468 mm Weight 32 kg. Are balance weights fitted? No Total weight 468 kg. Radius of gyration 190 mm
 Diameter of flywheel shaft No flywheel shaft Material _____ Minimum approved tensile strength _____
 Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) Flywheel fitted by coupling to crankshaft and gear shaft



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.

These engines are modified mass produced transport engines.

The scantling of the crankshafts were dimensionally checked and found as per approved plans.

The crankshafts were made under the survey of the Japanese Classification Society (N.K.) and the results of the materials tests as shown on the N.K. test certificates were checked by means of Brinell tests taken in the presence of the undersigned and found satisfactory.

The main engines have been examined under working condition during shop trial with satisfactory results, and further examined afterwards in the stripped condition and found in order.

It is submitted that these engines are eligible in our opinion to be classed with this Society with the notation of IMC (with date) when satisfactorily installed in the vessel and tested on board.

[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

CRANKSHAFT OR ROTORSHAFT

FLYWHEEL SHAFT

THRUSTSHAFT

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS

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

Date of approval of plans for crankshaft 12-2-62 Straight shafting _____ Gearing 12-2-62 Clutch 12-2-62

Separate oil fuel tanks _____ Pumping arrangements _____ Oil fuel arrangements _____

Cargo oil pumping arrangements _____ Air receivers _____ Donkey boilers _____

Dates of examination of principal parts:—

Fitting of stern tube _____ Fitting of propeller _____ Completion of sea connections _____ Alignment of crankshaft in main bearings _____

Engine chocks & bolts _____ Alignment of gearing _____ Alignment of straight shafting _____ Testing of pumping arrangements _____

Oil fuel lines _____ Donkey boiler supports _____ Steering machinery _____ Windlass _____

Date of Committee FRIDAY 28 SEP 1962 Special Survey Fee 764.00 *See Kott and Ship Spec*

Decision See Kott 2057 10641

Expenses

