

Rpt. 4b

Date of writing report 20/12/58. Received London 10 FEB 1959 Port L O N D O N . No. 139361  
 Survey held at STAMFORD, LINGS. No. of visits In shops Three. First date 8/12/58. Last date 18/12/58.  
 On vessel

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name M.V. "JIM M." Gross tons  
 Owners Managers Port of Registry Year Month  
 Hull built at By Yard No. When  
 Main Engines made at STAMFORD, LINGS. By Blackstone & Co., Ltd. Eng. No. M.85164. When 1958.12.  
 Gearing made at By  
 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 No. of propellers Brief description of propulsion system  
 MAIN RECIPROCATING ENGINES. Licence Name and Type No. Lister-Blackstone ERSMGR 4 vertical diesel.  
 No. of cylinders per engine 4. Dia. of cylinders 8 3/4". stroke(s) 11 1/2". 2 or 4 stroke cycle 4. Single or double acting Single.  
 Maximum approved BHP per engine 330. at 750. RPM of engine and 300 RPM of propeller.  
 Corresponding MIP 146 p.s.i. (For DA engines give MIP top & bottom) Maximum cylinder pressure 940 p.s.i. Machinery numeral 66.  
 Are the cylinders arranged in Vee or other special formation? No. If so, number of crankshafts per engine - T.V.C. is now being dealt with  
 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 One. No. of supercharge air coolers per engine None. Supercharge air pressure 4/5 p.s.i. Can engine operate without supercharger? Yes.  
 TWO & FOUR STROKE ENGINES-GENERAL. No. of valves per cylinder: Fuel One. Inlet One. Exhaust One. Starting Series. Safety One.  
 Material of cylinder covers Chrome Cast Iron. Material of piston crowns Allum: 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? 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. Total internal volume of crankcase 30 cu.ft.  
 devices 2-22 sq. in. 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? How is the engine started? Compressed air.  
 Can the engine be directly reversed? No. If not, how is reversing obtained? MWD. gearbox.  
 Has the engine been tested working in the shop? Yes. How long at full power? 4 hours plus 1 hour on 10% overload.  
 CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system State barred speed range(s), if imposed for working propeller X For spare propeller Is a governor fitted? Yes. Is a torsional vibration damper or detuner fitted to the shafting? No.  
 Where positioned? Type No. of main bearings 6 Are main bearings of ball or roller type? No. Distance between inner edges of bearings in way of crank(s) 10 1/4". 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 6 3/4". Diameter of crankpins Centre 6 1/8". Side Breadth of webs at mid-throw 7 3/4". Axial thickness of webs 2 25/32".  
 If shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals EN 8 Minimum 40 tons Approved per sq. in. Webs Tensile strength  
 Diameter of flywheel 38". Weight 1860 lb. Are balance weights fitted? No. Total weight Radius of gyration  
 Diameter of flywheel shaft 6 3/4". Material EN 8 Steel. Minimum approved tensile strength 40 tons per sq. in.  
 Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) Integral with crankshaft.

JEB.

PLEASE RETURN THIS REPORT WITH YOUR FIRST ENTRY.

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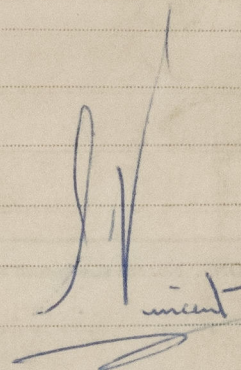
# GENERAL REMARKS

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.

This replacement Main Engine has been constructed and installed under Special Survey in accordance with the Rules. Secretary's letters and approved plans, tested under full power working conditions and found satisfactory.

The materials and workmanship are good and the machinery is eligible in my opinion to be classed in the Register Book N.E. 2,59 Oil Engine 4 S.A. 4 cyl. 8 $\frac{3}{4}$ " x 11 $\frac{1}{2}$ " with oil operated reverse/reduction gear box (S.R.).

During River trials no vibration or gear hammer was discernable throughout the engines governed ranged.



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

See London First Entry No.139361.

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

Straight shafting

Gearing

Clutch

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 30/1/59.

Completion of sea connections

Alignment of crankshaft in main bearings

Engine chocks & bolts

Box. Alignment of gear 21/1/59

Alignment of straight shafting 21/1/59.

Testing of pumping arrangements

Oil fuel lines

Donkey boiler supports

Steering machinery

Windlass

Date of Committee

Special Survey Fee

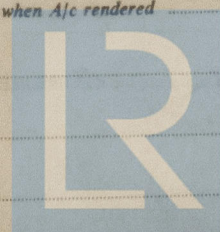
See Rpt 8.

Decision

Expenses

Date when A/c rendered

FEB 1959



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