

Rpt. 4b

110 FEB 1959

Date of writing report 3/2/59. Received London Hull. No. 64692.

Survey held at Hull. In shops No. of visits On vessel 5. First date 17/12/58 Last date 2/2/59.

REPLACEMENT

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. 65934 Name "JIM M" Gross tons 410

Owners Metcalf Motor Coasters, Ld, Managers T.J. Metcalf. Port of Registry London.

Hull built at Goole. By Goole S.B. & Rep. Co. Ltd. Year Month When 1944.9.

Main Engines made at Stamford. By R.A. Lister - Blackstone Co. Ld. Eng. No. M.85164. When 1958.12.

Gearing made at By

Donkey boilers made at By Blr. Nos. When

Machinery installed at Hull. By A. & E. Woodward, Ltd. When 1959.1.

Particulars of restricted service of ship, if limited for classification Coasting service U.K., Eire, Channel Islands & Continent between R. Elbe & Brest

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? No. 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.

No. of main engines 1 No. of propellers 1 Brief description of propulsion system Diesel.

MAIN RECIPROCATING ENGINES. Licence Name and Type No. R.A. Lister - Blackstone E.R.S.M.G.R.4.

No. of cylinders per engine Dia. of cylinders stroke(s) 2 or 4 stroke cycle 4 Single or double acting S.A.

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

Corresponding MIP (For DA engines give MIP top & bottom) Maximum cylinder pressure Machinery numeral

Are the cylinders arranged in Vee or other special formation? 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? Are the undersides of the pistons arranged as supercharge pumps? No. of exhaust gas driven blowers per engine No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

TWO & FOUR STROKE ENGINES-GENERAL. No. of valves per cylinder: Fuel Inlet Exhaust Starting Safety

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

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

Is the rod fitted with a sleeve? Is welded construction employed for: Bedplate Frames? Entablature? Is the crankcase separated from the

underside of pistons? Is the engine of crosshead or trunk piston type? Total internal volume of crankcase No. and total area of explosion relief

devices Are flame guards or traps fitted to relief devices? 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? Built-up seating. How is the engine started? Compressed air.

Can the engine be directly reversed? No. If not, how is reversing obtained? Reverse reduction gear box M.W.D. No. 1890.

Has the engine been tested working in the shop? Yes. How long at full power?

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system Applied for. State barred speed range(s), if imposed

for working propeller For spare propeller Is a governor fitted? Is a torsional vibration damper or detuner fitted to the shafting?

Where positioned? Type No. of main bearings Are main bearings of ball or roller

type? Distance between inner edges of bearings in way of crank(s) Distance between centre lines of side cranks or eccentrics of opposed piston engines

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

Diameter of journals Diameter of crankpins Centre Breadth of webs at mid-throw Axial thickness of webs

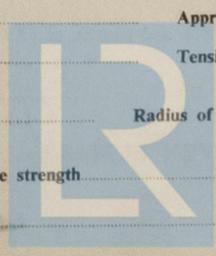
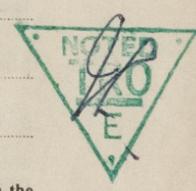
If shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals Approved

Diameter of flywheel Weight Are balance weights fitted? Total weight Radius of gyration

Diameter of flywheel shaft Material Minimum approved tensile strength

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

PLEASE SEE LONDON FIRST ENTRY REPORT No. 139361.



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MAIN GAS TURBINES. Name and Type No. ....

No. of sets of turbines ..... Open or closed cycle ..... BHP per set ..... at ..... RPM of output shaft .....

How is drive transmitted to propeller shaft? .....

ARRANGEMENT OF TURBINES. HP drives ..... at ..... RPM HP gas inlet temperature ..... pressure .....

(A small diagram should be attached showing gas cycle.) IP drives ..... at ..... RPM IP gas inlet temperature ..... pressure .....

LP drives ..... at ..... RPM LP gas inlet temperature ..... pressure .....

No. of air compressors per set ..... Centrifugal or axial flow type? ..... Material of turbine blades ..... Material of

compressor blades ..... No. of air coolers per set ..... No. of heat exchangers per set ..... How are turbines started? .....

How is reversing effected? ..... Are the turbines operated in conjunction with free piston gas generators? .....

Total No. of free piston gas generators ..... Diameter of working pistons ..... Diameter of compressor pistons ..... No. of double strokes per

minute at full power. .... Gas delivery pressure ..... Gas delivery temperature ..... Have the turbines and attached equipment been tested working

in the shop? ..... How long at full power? .....

ELECTRIC PROPULSION (Reciprocating engines or gas turbines. Electrical particulars to be reported on Form 4d.)

No. of generators ..... KW per generator ..... at ..... RPM AC or DC? ..... Position .....

No. of propulsion motors ..... SHP per motor ..... at ..... RPM Position .....

How is power obtained for excitation of generators? ..... Motors? .....

REDUCTION GEARING (Reciprocating engines or gas turbines. A small line sketch should be attached showing arrangement of gearing.)

Is gearing of single or double helical type? ..... If single, position of gear thrust bearing ..... Is gearing of epicyclic type? .....

PCD of pinions: First reduction ..... Second reduction ..... PCD of wheels: First reduction ..... Main .....

Material of pinions ..... Tensile strength ..... Material of wheel rims ..... Tensile strength .....

Are gear teeth surface hardened? ..... How are teeth finished? ..... Diameter of pinion journals ..... Wheel shaft

journals ..... Are the wheels of welded construction? ..... Is gearcase of welded construction? ..... Has the wheel/gearcase been heat treated on completion

of welding? ..... Where is the propeller thrust bearing located? ..... Are gear bearings of ball or roller type? .....

CLUTCHES, FLEXIBLE COUPLINGS, ETC. If a clutch or other flexible connection is fitted between engine/turbine and gearing or between engine and line shafting give brief description and, for clutches, state how operated. Oil operated clutches in gearbox.

Rubber bonded flexible coupling between engine and gearbox (attached London Cert. No. M.W.D. 1890).

Can the main engine be used for purposes other than propulsion when declutched? No. If so, what? .....

STRAIGHT SHAFTING. Diameter of thrustshaft ..... Material ..... Minimum approved tensile strength .....

Shaft separate or integral with crank or wheel shaft? ..... Diameter of intermediate shaft ..... Material .....

Minimum approved tensile strength ..... Diameter of screwshaft cone at large end ..... Is screwshaft fitted with a continuous liner? .....

Diameter of tube shaft. (If these are separate shafts) ..... Is tube shaft fitted with a continuous liner in way of stern tube ..... Thickness of screw/tube shaft liner at

bearings ..... Thickness between bearings ..... Material of screw/tube shaft ..... Minimum approved tensile strength .....

Is an approved oil gland fitted? ..... If so, state type ..... Length of bearing next to and supporting propeller .....

Material of bearing ..... In multiple screw vessels is the liner between stern tube and A bracket continuous? ..... If not, is the exposed length of shafting between

liners readily visible in dry dock? .....

PROPELLER. Diameter of propeller 61.5" Pitch 30.38" Built up or solid Solid R.H. Total developed surface 1670 sq. in.

No. of blades 4 Blade thickness at top of root fillet 2.5/16" Blade material M. Bronze. Moment of inertia of dry propeller Not available.

If propeller is of special design, state type ..... Is propeller of reversible pitch type? No. If so, is it of approved design? .....

State method of control ..... Material of spare propeller None. Moment of inertia .....

AIR COMPRESSORS & RECEIVERS. No. of main engine driven compressors per engine None. Can they be declutched? .....

No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) .....

No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) .....

How are receivers first charged? ..... Maximum working pressure of starting air system ..... Are the safety devices in

accordance with the Rules? ..... Has the starting of the main engines been tested and found satisfactory? Yes. ....

COOLERS. No. of main engine fresh water coolers ..... No. of main engine lubricating oil coolers. See London F.E. Rpt. No. 139361.

OIL FUEL TANKS. No. and position of oil fuel settling or service tanks not forming part of hull structure .....

MAIN ENGINE DRIVEN PUMPS (No. and Purpose) Please see London F.E. Rpt. No. 139361.

AS ORIGINALLY FITTED.

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