

pt. 4b
ship and g
ly as possib
of writing report 11.4.59
Received London
Port LONDON
No. 2800140008
In shops 5
First date 9.3.59
Last date 9.4.59
ey held at Stamford, Lincs.
No. of visits
On vessel

IRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

in R.B. Name "MAKOURIA" Gross tons

Managers Port of Registry Year Month

built at Glasgow By Ferguson Bros. Ltd. Yard No. 428

Engines made at Stamford Lincs. By Blackstone & Co. Ltd. Eng. No. M.86158 M.86159 When 1959-4.

ing made at By

key boilers made at By Blr. Nos. When

hinery installed at By When

iculars of restricted service of ship, if limited for classification

iculars of vegetable or similar cargo oil notation, if required

ip to be classed for navigation in ice? Is ship intended to carry petroleum in bulk?

frigerating machinery fitted? If so, is it for cargo purposes? Type of refrigerant

e refrigerating machinery compartment isolated from the propelling machinery space? Is the refrigerated cargo installation intended to be classed?

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
ling 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
rt need not be repeated below, but the port and report number should be stated.

er of Shippin of main engines 2 No. of propellers 2 Brief description of propulsion system

IN RECIPROCATING ENGINES. Licence Name and Type No. Lister Blackstone EVNGR 6 type vertical diesel engines.

of cylinders per engine 6 Dia. of cylinders 8 3/4 stroke(s) 11 1/2 2 or 4 stroke cycle 4 Single or double acting Single

imum approved BHP per engine 255 at 600 RPM of engine and 300 RPM of propeller.

esponding MIP 102 p.s.i. (For DA engines give MIP top & bottom) Maximum cylinder pressure 800 p.s.i. Machinery numeral 51 X 2 = 102

the cylinders arranged in Vee or other special formation? No. If so, number of crankshafts per engine

STROKE ENGINES. Is the engine of opposed piston type? If so, how are upper pistons connected to crankshaft?

e 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

ie and how driven

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?

stand-by or emergency pump or blower is fitted, state how driven No. of scavenge air coolers Scavenge air pressure at full

Are scavenge manifold explosion relief valves fitted?

R 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

No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

& FOUR STROKE ENGINES-GENERAL. No. of valves per cylinder: Fuel 1 Inlet 1 Exhaust 1 Starting series 2 in Safety 1

rial of cylinder covers Cast Iron Material of piston crowns Alum. Alloy Is the engine equipped to operate on heavy fuel oil? No

ng medium for :—Cylinders Fresh water Pistons Nil Fuel valves Nil Overall diameter of piston rod for double acting engines

rod fitted with a sleeve? Is welded construction employed for: Bedplate? No Frames? No Entablature? No Is the crankcase separated from the

side of pistons? No Is the engine of crosshead or trunk piston type? Trunk Total internal volume of crankcase 44 cu.ft. No. and total area of explosion relief

s 4-44 sq. ins. Are flame guards or traps fitted to relief devices? Yes Is the crankcase readily accessible? Yes If not, must the engine be removed for

ul of bearings, etc? Is the engine secured directly to the tank top or to a built-up seating? How is the engine started? Comp. Air.

he engine be directly reversed? No If not, how is reversing obtained?

he engine been tested working in the shop? Yes How long at full power? 4 hrs. plus 1 hr. on 10% overload.

NK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 29.1.59 State barred speed range(s), if imposed

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

1. Free end of crankshaft 1. Atlas hydraulic
positioned? 2. In Flywheel coupling. Type 2. Viscous No. of main bearings 8 Are main bearings of ball or roller

No Distance between inner edges of bearings in way of crank(s) 10 1/16 Distance between centre lines of side cranks or eccentrics of opposed piston engines

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

ter of journals 6 3/4 Diameter of crankpins Centre 6 1/8 Breadth of webs at mid-throw 7 3/4 Axial thickness of webs 25/32

rk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals EN.8 Steel Pins Minimum 40 tons/sq.in.

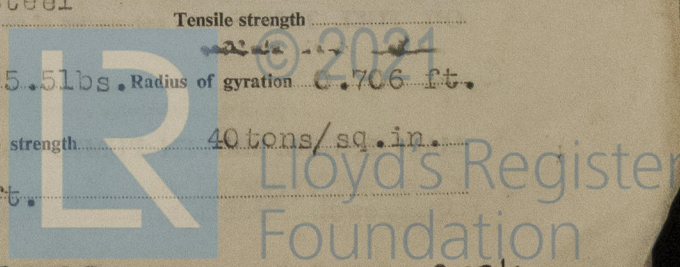
er of flywheel 38 Weight 1860 Are balance weights fitted? Yes Total weight 295.5 lbs. Radius of gyration 7.706 ft.

er of flywheel shaft 6 3/4 Material EN.8 Steel Minimum approved tensile strength 40 tons/sq.in.

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

C.D.

010478-010483-0328 1/2



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, Works Order BM.90304 & 5 have been built under Special Survey from materials manufactured under the supervision of Surveyors to the Society in accordance with approved plans and the Rules of the Society. Workmanship throughout is good. In my opinion they are eligible for installation in a Classed vessel.

W. Waddle

W. WADDLE.

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 1). 5 off BCX142, 1 off BCX141. 2). 3 off BCX142, 3 off BCX 141. WW.LON 9.3.59 Batch forging certificate BHAM C.36913.

CRANKSHAFT OR ROTARY SHAFT 1) 3554 V AD. 21.11.58. WW. LON. 2) 3556 V MCH. 8.12.58. 9.3.59.

FLYWHEEL SHAFT

THRUSTSHAFT

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS Cylinder blocks with liners and heads:- Lloyds test 100lbs WW.LON 9.3.59.

Is the installation a duplicate of a previous case?

If so, state name of vessel

Date of approval of plans for crankshaft 29.1.59

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

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

GLASGOW 27 OCT 1959

Special Survey Fee £51.5.0.

Decision

SEE ACCOMPANYING MACHINERY REPORT

Expenses £10.5.0.

Date when A/c rendered

5 MAY 1959

