

Rpt. 4b

Date of writing report 14.8.59 Received London LONDON Port LONDON No. 140717
Survey held at Stamford, Lincs. No. of visits In shops 8 First date 16.3.59 Last date 10.8.59
On vessel

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name Gross tons
Owners Managers Port of Registry
Hull built at Appledore, Devon By P.K.Harris Shipbuilders. Yard No. 124 Year Month
Main Engines made at Stamford. By Blackstone & Co. Eng. No. ERS8.PR.59E.204 When 1959-7
ERS8.P. 59E.203
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 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
MAIN RECIPROCATING ENGINES. Licence Name and Type No. Lister-Blackstone ERS8MGR8. Supercharged
No. of cylinders per engine 8 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 540 at 750 RPM of engine and RPM of propeller.
Corresponding MIP 123 p.s.i. (For DA engines give MIP top & bottom) Maximum cylinder pressure 900 ps.i. Machinery numeral 2 x 108 = 216
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 None Supercharge air pressure 4/5 p.s.i. Can engine operate without supercharger? Yes
2 in

TWO & FOUR STROKE ENGINES-GENERAL. No. of valves per cylinder: Fuel 1 Inlet 1 Exhaust 1 Starting series Safety 1
Material of cylinder covers Cast Iron Material of piston crowns Alum: Alloy Is the engine equipped to operate on heavy fuel oil? No

Cooling medium for: Cylinders Fresh water Pistons None Fuel valves None 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 56 cu.ft. No. and total area of explosion relief devices 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 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.MWKR.3E. REV/RED.Gearbox. No. 12354.

Has the engine been tested working in the shop? Yes How long at full power? 4 hours & 1 hr. on 10% overload. Base 4185

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system Secy.ltr. 17.6.58 20.7.59 + 10/11/59
For working propeller For spare propeller Is a governor fitted? Yes Is a torsional vibration damper or detuner fitted to the shafting? Yes

Where positioned? Ford End of Crankshaft Type "Atlas Hydraulic No. of main bearings 10 Are main bearings of ball or roller
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

Cranks: Built, semi-built, solid. (State which) Solid
Diameter of journals 6 3/4 Diameter of crankpins Centre 6 1/8 Side 6 1/8 Breadth of webs at mid-throw 7 3/4 Axial thickness of webs 2 25/32

Shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals EN.8 Minimum 40 tons/sq.in.
Webs Steel Approved 40 tons/sq.in.
Tensile strength

Diameter of flywheel 38 Weight 1860 lbs. 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/sq.in.

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

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 BM.90416 & 7 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 X22-23-23-15-21-20; BCX 111-112. WW.LON. covered by batch certificates
X24-24-20; BCX 132-113; 3 off 4463K362 16.3.59.
BHAM.F752; F753; C28063; C28051; C35393 and LDS. C30722.

CRANKSHAFT OR ROTORSHAFT 3896 X RJY. WW.
3897 X MCH. LON. 16.3.59.

FLYWHEEL SHAFT

THRUSTSHAFT

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS Cylinder blocks with liners and heads:- LLOYD'S TEST 100lbs. WW.LON 16.3.59.

Is the installation a duplicate of a previous case?

If so, state name of vessel

Date of approval of plans for crankshaft 8.5.59

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

FRIDAY 22 JAN 1960

Construction Special Survey Fee £92.10.0.

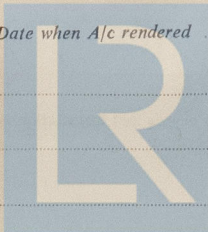
Decision

See Rpt. 1

Expenses £18.10.0.

Date when A/c rendered

9 SEP 1959



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