

Rpt. 4b

Date of writing report

18.3.57

Received London

27 MAR 1957

Port

Glasgow

No.

86638

Survey held at

Glasgow

No. of visits

In shops

First date

31.5.55

Last date

27.2.57

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. 91096. Name H.M. Tug. "DEXTEROUS" Gross tons 450.

Owners The Admiralty. Managers By Messrs James Co. Ltd. Port of Registry Year Month

Hull built at Scotstoun, Glasgow By Messrs Denny Parsons Co. Ltd. Yard No. 2089. When 57 2.

Main Engines made at Colchester By Messrs Denny Parsons Co. Ltd. Eng. No. 400040/647. When 57 2.

Gearing made at By Blr. Nos. When

Donkey boilers made at By Blr. Nos. When 57 2.

Machinery installed at Glasgow By Messrs James Co. Ltd. When 57 2.

Particulars of restricted service of ship, if limited for classification Towing and Salvage Services.

Particulars of vegetable or similar cargo oil notation, if required

Is ship to be classed for navigation in ice? No. Is ship intended to carry petroleum in bulk? No.

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. 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 4 Oil Engines driving 4 generators supplying power to 2 main propulsion motors, which drive side paddles through a chain reduction drive.

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Paxman Type 12 V HAXM

No. of cylinders per engine 12 Dia. of cylinders 7" stroke(s) 7 3/4" 2 or 4 stroke cycle 3mr Single or double acting Single

Maximum approved BHP per engine 491 at 1000. RPM of engine and 26.5 RPM of propeller.

Corresponding MIP 136 lbs/sq. in. (For DA engines give MIP top & bottom) Maximum cylinder pressure 1150 lbs/sq. in. Machinery numeral 396 MN.

Are the cylinders arranged in Vee or other special formation? Vee formation. If so, number of crankshafts per engine One.

~~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 scavenging pumps or blowers per engine and how driven

No. of exhaust gas driven scavenging 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 scavenging air coolers Scavenging air pressure at full power

Are scavenging 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 Pistons Fuel valves No. 133770 Overall diameter of piston rod for double acting engines~~

~~Is the rod fitted with a sleeve? Is welded construction employed in the crankcase? 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? 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? Built-up seating How is the engine started? Compressed Air Motor.~~

~~Can the engine be directly reversed? No. If not, how is reversing obtained? Reversible Propulsion Motors.~~

~~Has the engine been tested working in the shop? How long at full power? generating machinery system 26.5.55. State barred speed range(s), if imposed~~

~~CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system~~

~~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 web at end-throw Axial thickness of webs~~

~~If shrunk, radial thickness around eyeholes Are dowl pins fitted? Crankshaft material Journals Pins Minimum~~

~~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)~~

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 machinery has been efficiently installed on board in accordance with the Secretary's letter, approved plans and the Admiralty Specifications. The materials and workmanship have been found good. The machinery has been satisfactorily tested under full working conditions at sea, and is eligible in my opinion to be classed in the Register with the notation + LMC 2.57. Oil Engines.

A. Campbell

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

Port Chain Wheel No M1542 Start Chain Wheel M1494. Pinion Wheels. Start 11620604 49744/1 1744. Port 11620604 40071/2.

INTERMEDIATE SHAFTS

Port Intermediate 17, 7915 8738 / 961 T A.B. Start Intermediate 17, 7915 8738 / 964 T A.B.

PROPELLER

SCREW AND TUBE SHAFTS

Port 17, 7915 8738 / 963 T A.K. Start 17, 7915 8738 / 963 B A.B.

PROPELLERS

PINION SHAFTS. Port 17, 7915 8738 TP / 968 T; Start 17, 7915 8738 TP / 967 B.

OTHER IMPORTANT ITEMS

FLEXIBLE COUPLINGS:- Port 348506 Start 348506.

DOG CLUTCHES. 17, 7915 8738 / 961 TP

Is the installation a duplicate of a previous case? Yes.

If so, state name of vessel "Director"

Date of approval of plans for crankshaft

PROBLE

Shafting 17.1.56.

Chain Drive

Gearing 3.9.56.

Clutch 17.1.56.

Separate oil fuel tanks

6.9.55.

Pumping arrangements

15.5.56.

Oil fuel arrangements

19.3.56.

Cargo oil pumping arrangements

Air receivers

Donkey boilers

Dates of examination of principal parts:-

Fitting of stern tube

Fitting of propeller 16.8.56.

Completion of sea connections 29.6.56.

Alignment of crankshaft in main bearings

Engine chocks & bolts

30.8.56.

Alignment of gearing 17.9.56.

Alignment of shafting 29.11.56.

Testing of pumping arrangements 8.2.57.

Oil fuel lines

24.12.56.

Donkey boiler supports

Steering machinery 11.2.57.

Windlass 11.2.57.

Date of Committee

GLASGOW 26 MAR 1957

Special Survey Fee

Decision

+ LMC

2.57

Oil Eng.

Expenses

Date when A/c rendered

26 MAR 1957

