

Rpt. 4c

AND AIR COMPRESSOR

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 12,144.

Date of writing Report 26th Mar 19 45. When handed in at Local Office 29th Mar 19 45. Port of MANCHESTER.

No. in Survey held at MANCHESTER. Date, First Survey 15th Feb. 1945. Last Survey 22nd March 19

Reg. Book. on the Twin Triple Quadruple } Screw vessel M/T 'Empire Belgrave' Number of Visits Five.

Built at GLASGOW. By whom built A & J. Inglis Ltd. Yard No. J. 283. When built

Owners. Port belonging to

Oil Engines made at ALTRINCHAM. By whom made Russell, Newbery & Co. Ltd. Engine No. 3885. When made 1945.

Generators made at STOCKPORT. By whom made McClure & Whitfield Ltd. Generator No. 10227. When made 1945.

No. of Sets 1. Engine Brake Horse Power 36. Nom. Horse Power as per Rule 10.3. Total Capacity of Generators 18 Kilowatts.

OIL ENGINES, &c.—Type of Engines Vertical solid Injection Heavy Oil. 2 or 4 stroke cycle 4 Single or double acting Single.

Maximum pressure in cylinders 860 lbs/sq" Diameter of cylinders 4 1/8" Length of stroke 6" No. of cylinders 4 No. of cranks 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5 1/8" Is there a bearing between each crank Yes.

Revolutions per minute 1000 Flywheel dia. 22" Weight 263 lbs. Means of ignition Compression Kind of fuel used Diesel Oil.

Crank Shaft, dia. of journals as per Rule Approved. as fitted 2 1/2" Crank pin dia. 2 3/8" Crank Webs Mid. length breadth 3 1/2" Thickness parallel to axis

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 11/32"

Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes. Means of lubrication Forced.

Are the cylinders fitted with safety valves No. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

Cooling Water Pumps, No. One - plunger type Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size One - gear type.

Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. Diameter Stroke Driven by

AIR RECEIVERS:—Have they been made under Survey State No. of Report or Certificate

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces

Is there a drain arrangement fitted at the lowest part of each receiver

High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

ELECTRIC GENERATORS:—Type Compound Wound Continuous Rating V.E. Louvred Type.

Pressure of supply 110 volts. Full Load Current 163 1/2 Amperes. Direct or Alternating Current Direct.

If alternating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown

on and off Yes. Generators, are they compounded as per Rule Yes. is an adjustable regulating resistance fitted in series with each shunt field Yes.

Are all terminals accessible, clearly marked, and furnished with sockets Yes. Are they so spaced

or shielded that they cannot be accidentally earthed, short circuited, or touched Yes. Are the lubricating arrangements of the generators as per Rule Yes.

If the generators are under 100 kw. full load rating, have the makers supplied certificates of test Yes. and do the results comply with the requirements Yes.

If the generators are 100 kw. or over have they been built and tested under survey

PLANS.—Are approved plans forwarded herewith for Shafting 1.9.44. Receivers Separate Tanks

SPARE GEAR AS PER RULE REQUIREMENTS.

The foregoing is a correct description,
per pro. RUSSELL, NEWBERY & Co. Ltd.

Manufacturer.

DIRECTOR



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Lloyd's Register
Foundation

W 986-0179

Dates of Survey while building { During progress of work in shops - - 1945. Feb. 15. March. 2, 3, 5, 22. During erection on board vessel - - - - - Total No. of visits

Dates of Examination of principal parts—Cylinders. 15.2.45. Covers 2,3,5.3.45. Pistons. 15.2.45. Piston rods. Connecting rods. 15.2.45. Crank and Flywheel shafts. 15.2.45. Intermediate shafts.

Crank shaft { Material 0. H. Steel. Tensile strength 41.6 Elongation 26.0 on 2" Identification Marks LLOYD'S 2537. FH. 23.3.44.

Flywheel shaft, Material. Identification Marks.

Is this machinery duplicate of a previous case. No. Identification Marks.

Identification marks on Air Receivers.

Is this machinery duplicate of a previous case. No. If so, state name of vessel.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) THIS ENGINE HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND IS IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE OF A GOOD QUALITY AND THE ENGINE, WHEN TESTED IN THE SHOP UNDER FULL LOAD CONDITIONS SHEWED SATISFACTORY RESULTS. THE REQUIREMENTS OF NOTICE NO. 1 HAVE, HOWEVER, NOT YET BEEN CARRIED OUT. WHEN THIS HAS BEEN DONE AND APPROVED, THE ENGINE WILL BE IN MY OPINION, BE SUITABLE TO BE PLACED ON BOARD A VESSEL CLASSED WITH THIS SOCIETY FOR THE PURPOSE INTENDED.

COPIES OF CERTIFICATES COVERING GENERATOR AND CENTRIFUGAL PUMP ATTACHED HERewith.

The amount of Fee ... £ 4 : 4 : 0 When applied for 29. 3. 19 45. Travelling Expenses (if any) £ 0 : 10 : 0 When received 19

Committee's Minute

Assigned