

pt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

AND COMPRESSOR

No. 11379

Date of writing Report 19 When handed in at Local Office 19 Port of MANCHESTER. Received at London Office 25 FEB 1943

No. in Surrey held at ASHTON-UNDER-LYNE Reg. Book.

Date, First Survey 15 Jan. 1943 Last Survey 5 Feb. 1943 Number of Visits Three.

Single on the Twin Triple Quadruple Screw vessel

EMPIRE VICEROY

Tons Gross Net

Built at BARROW

By whom built Vickers Armstrongs Ltd. Yard No. 858 Richardson's Westgarth & Co. Main Engine No. 2734. When built

Port belonging to

Oil Engines made at Ashton-under-Lyne By whom made National Gas & O.E.Co. Engine No. 56620. When made 1943. Generators made at Stockport By whom made Mc.Clure & Whitfield. Generator No. 9480. When made 1943.

No. of Sets One Engine Brake Horse Power 20 Nom. Horse Power as per Rule 3.3 Total Capacity of Generators 10 Kilowatts.

Vertical Solid Injection. 2 or 4 stroke cycle 4 Single or double acting Single. Maximum pressure in cylinders 750 lbs/sq" Diameter of cylinders 4 1/8" Length of stroke 6" No. of cylinders Two No. of cranks Two.

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. 25" Weight 337 lbs. Means of ignition Compression Kind of fuel used Direct Oil.

Crank Shaft, dia. of journals as per Rule Approved. as fitted 2 3/8" Crank pin dia. 2 3/8" Crank Webs Mid. length breadth 3 1/4" Thickness parallel to axis Solid. Mid. length thickness 1.5/16" Thickness around eye-hole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 3/8"

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 Centrifugal Type the sea suction provided with an efficient strainer which can be cleared within the vessel -

Lubricating Oil Pumps, No. and size One incorporated in Engine. Air Compressors, No. One No. of stages Two Diameters See Certificate No. D.7339 herewith. Stroke Driven by Clutch.

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. Pressure of supply 220 volts. Full Load Current 45.5 Amperes. Direct or Alternating Current Direct.

Is an 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. Are the generators, are they compounded as per rule is an adjustable regulating resistance fitted in series with each terminal field

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.

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

APPROVED. Are approved plans forwarded herewith for Shafting 26.3.42. Receivers - Separate Tanks -

PREPARE GEAR AS PER RULE REQUIREMENTS.

The foregoing is a correct description.

THE NATIONAL GAS AND OIL ENGINE Co. Ltd. Manufacturer.



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Dates of Survey while building { During progress of work in shops - - 1943. Jan:15, 29. Feb:5.
 { During erection on board vessel - - -
 Total No. of visits Three.

Dates of Examination of principal parts—Cylinders 15.1.43. Covers 29.1.43. Pistons 15.1.43. Piston rods -
 Connecting rods 5.2.43. Crank and Flywheel shafts 15.1.43. Intermediate shafts -
 Crank and Flywheel shafts, Material O.H. Steel. Identification Marks LLOYD'S 1504 FH. 15.10.42.
 Intermediate shafts, Material - Identification Marks -
 Identification marks on Air Receivers -

Is this machinery duplicate of a previous case - 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 SHOP UNDER FULL LOAD CONDITIONS SHEWED SATISFACTORY RESULTS. IN MY OPINION, THIS ENGINE IS SUITABLE TO BE PLACED ON BOARD A VESSEL CLASSED WITH THIS SOCIETY FOR THE PURPOSE INTENDED.

Sash factories fitted on board.
Edley J. Knowles
 Barrow

The amount of Fee ... £ 4 : 4 : - : When applied for, 23/4/43 19...
 Travelling Expenses (if any) £ - : 15 : - : When received, 19...

Ed Knowles
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 14 SEP 1943

Assigned *see minute on Rev F. O. R. p.*



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 (The Surveyors are requested not to write on or below the space for Committee Minute.)