

Rpt. 4c.

AND CENTRIFUGAL PUMP

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 12,139.

Date of writing Report 19th Mar. 1945. When handed in at Local Office 23rd Mar 1945. Port of MANCHESTER.

No. in Survey held at ALTRINCHAM. Date, First Survey 16th February. Last Survey 10th March 1945.

Reg. Book. Single on the Twin Triple Quadruple Screw vessel M/T "Empire Belgrave". Number of Vessels Two.

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

Owners. Port belonging to.

Oil Engines made at ALTRINCHAM. By whom made Russell, Newbery &amp; Co. Ltd. Engine No. 3881. When made 1945.

Generators made at STOCKPORT. By whom made McClure &amp; Whitfield Ltd. Generator No. 10216. When made 1945.

No. of Sets 1. Engine Brake Horse Power 18. Nom. Horse Power as per Rule 5.1. Total Capacity of Generators 6.5 Kilowatts.

OIL ENGINES, &amp;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 2 No. of cranks 2

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 345 lbs. Means of ignition Compression Kind of fuel used Diesel oil.

SPEC Crank Shaft, dia. of journals as per Rule Approved. 2 1/2" Crank pin dia. 2 3/8" Crank Webs Mid. length breadth 3 1/2" Thickness parallel to axis 1 5/16" Mid. length thickness 1 5/16" Thickness round eye hole.

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

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

NO.1 Are the cylinders fitted with safety valves No. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material.

BE 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 59 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 Tables.

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

W986-0180



Dates of Survey while building { During progress of work in shops - - 1945. 16th February. 10th March. During erection on board vessel - - - - - Total No. of visits - - - - -

Dates of Examination of principal parts—Cylinders 16.2.45. Covers 16.2.45. Pistons 16.2.45. Piston rods -

Connecting rods 16.2.45. Crank and Flywheel shafts 16.2.45. Intermediate shafts -

Crank shaft { Material 0.H. Steel. Tensile strength 44.8 tons per sq.in. Elongation 25.0% Identification Marks LLOYD'S J.2530. B.O.G. 30.6.44

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 SPEC 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. THE REQUIREMENTS OF NOTICE NO.1803 HAVE, HOWEVER, NOT YET BEEN CARRIED OUT. WHEN THIS HAS BEEN DONE AND APPROVED, THE ENGINE WILL, IN MY OPINION, BE SUITABLE TO BE PLACED ON BOARD A VESSEL CLASSSED 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 24. 3. 1945. Travelling Expenses (if any) £ 0 : 6 : 0 { When received 19

Committee's Minute

Assigned