

Emp 71304

# REPORT ON OIL ENGINE ELECTRIC GENERATOR/SETS.

CENTRIFUGAL PUMP

No. 12436

pt. 4c.

Received at London Office 15 FEB 1946

Date of writing Report 24th Jan. 1946 When handed in at Local Office 31st Jan. 1946 Port of MANCHESTER.

No. in Survey held at ALTRINGHAM. Date, First Survey 27.11.45. Last Survey 3rd Jan. 1946.

Size of opening 15/16" on the Twin Triple Quadruple Screw vessel EMPIRE TADMUIR Number of Visits Five. Tons Gross 891 Net 381

Built at Glasgow. By whom built A. & J. Inglis Ltd. 1313P-1311P-1314P. Yard No. 1314P. When built 1945.

Oil Engines made at Altrincham. By whom made Russell Newbery & Co. Ltd. Engine No. 3974. When made 1945.

Generators made at Stockport. By whom made McClure & Whitfield. Generator No. 10506. 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 1/2 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 260 lb/sq. in. Diameter of cylinders 4 1/8". Length of stroke 5". 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 1,000. Flywheel dia. 25". Weight 345 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. Mid. length thickness 1 5/16" shrunk. Thickness round eye-hole.

Flywheel Shaft, diameter as per Rule. Intermediate Shafts, diameter as per Rule. 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 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 Tanks -

SPARE GEAR As per Rule Requirements.

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

J. Russell DIRECTOR

Manufacturer.



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Dates of Survey while building { During progress of work in shops - - ) 1945: November 27, December, 7, 12, 17, 1946: January, 3.  
 { During erection on board vessel - - )  
 Total No. of visits. Five.

Dates of Examination of principal parts—Cylinders 27.11.45. Covers 12.12.45. Pistons 17.12.45. Piston rods. -  
 Connecting rods. 7.12.45. Crank and Flywheel shafts 27.11.45. Intermediate shafts -

Crank shaft { Material O.H. Steel. Tensile strength 44.4 tons per sq. inch.  
 { Elongation 25%. Identification Marks Lloyd's J.2529 B.O.G. 28.6.44.

Flywheel shaft, Material. Identification Marks.  
 Is this machinery duplicate of a previous case. Identification Marks.

Identification marks on Air Receivers.  
 Hamworthy Centrifugal Pump No. 69336.

Is this machinery duplicate of a previous case. Yes. If so, state name of vessel. A. & J. Inglis Yard No. J.283 (Mch. Rpt. 12244).

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, SHOWED 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 BE, IN MY OPINION, 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 31.1.46. 19  
 Travelling Expenses (if any) £ - : 15 : 0. { When received 19

Committee's Minute  
 Assigned  
 GLASGOW 4 JUN 1946  
 ACCOMPANYING MACHINERY REPORT

Surveyor to Lloyd's Register of Shipping.  
 Lloyd's Register Foundation

Rpt. 4c.  
 27 MAR 1946  
 Date of writing  
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Im. 11.42.-T. (MADE AND PRINTED IN ENGLAND). (The Surveyors are requested not to write on or below the space for Committee Minute.)