

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 9656

Received at London Office JUL 19 1939

Date of writing Report 15 July 1939 When handed in at Local Office 18 July 1939 Port of MANCHESTER.  
 No. in Survey held at Reg. Book. MANCHESTER Date, First Survey 26 APRIL 1939 Last Survey 14 July 1939  
 Number of Visits 6

on the Single Triple Quadruple Screw vessel  
 Built at HONG KONG. By whom built HONG KONG & WHAMPOA DOCK CO Yard No. 819 When built 1939  
 Owners NEWCASTLE & HUNTER RIVER S.S. CO. LTD Port belonging to  
 Oil Engines made at MANCHESTER By whom made L. GARDNER & SONS LTD ENGINE No. 46871. When made 1939  
 Generators made at MANCHESTER By whom made LANCASHIRE DYNAMO CRYSTOL ENGINE No. 147051 When made 1939  
 No. of Sets ONE. Engine Brake Horse Power 20. Nom. Horse Power as per Rule 5.75 Total Capacity of Generators 12. Kilowatts.

IL ENGINES, &c.—Type of Engines VERTICAL SOLID INJECTION. 2 or 4 stroke cycle 4 Single or double acting SINGLE.  
 Maximum pressure in cylinders 650. lps/sq. Diameter of cylinders 4.25" 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 5.75" Is there a bearing between each crank YES  
 Revolutions per minute 1000. Flywheel dia. 26" Weight 511. lbs Means of ignition COMPRESSION Kind of fuel used HEAVY OIL.  
 Crank Shaft, dia. of journals as per Rule AS APPROVED. Crank pin dia. 2 5/8" Mid. length breadth 4" Thickness parallel to axis SOLID  
 as fitted 2 5/8" Crank Webs Mid. length thickness 1 3/8" shrunk Thickness around eyehole  
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners .096"  
 as fitted Means of lubrication FORCED

Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES  
 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 Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
 Lubricating Oil Pumps, No. and size ONE. 28. GALLS PER HR APPROX.  
 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  
 Pressure of supply 110 volts. Full Load Current 109 Amperes. Direct or Alternating Current DIRECT  
 If alternating current system, state the periodicity Has the Automatic Governor been tested and found efficient when the whole 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 Are all terminals accessible, clearly marked, and furnished with sockets  
 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-MAY. 1939 Receivers. Separate Tanks

SPARE GEAR 1. CYLINDER HEAD. 1 SET PISTON RINGS.  
 1. CYLINDER LINER  
 1. PISTON ASSEMBLY.

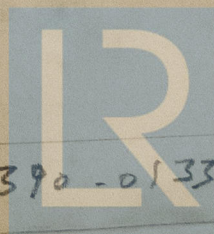
These articles are additional to Rule requirements.  
 See Note. Lb 31/7/39.  
 L.Y.

The foregoing is a correct description,  
 L. GARDNER & SONS LTD.

William Gardner

Director.

Manufacturer.



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Lloyd's Register Foundation

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4. N<sup>o</sup> 819.

Dates of Survey while building { During progress of work in shops - - } 1939. May 26. 30. June 6. 20. July 7. 14.  
{ During erection on board vessel - - - }  
Total No. of visits 6.

Dates of Examination of principal parts—Cylinders 26-5-39 Covers 30/5/39. 6/6/39. Pistons 20/6/39 Piston rods —  
Connecting rods 20-6-39 Crank and Flywheel shafts 20-6-39 Intermediate shafts —  
Crank and Flywheel shafts, Material STEEL. Identification Marks LLOYDS. 92942. JWL. 8-11-38  
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 SET WHEN TESTED IN SHOP UNDER FULL LOAD CONDITIONS SHOWN SATISFACTORY RESULTS. IN MY OPINION THIS ENGINE IS SUITABLE TO BE PLACED ON BOARD A VESSEL, CLASSED WITH THIS SOCIETY, FOR THE PURPOSE INTENDED.

CERTIFICATE OF TEST FOR GENERATOR IS ATTACHED

The amount of Fee ... £ 4 : 4 : 0 When applied for, 18.7.1939 JWL  
Travelling Expenses (if any) £ 6 : 0 When received, 1/9/39 RLD 16/11

*W. Leicester*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned

FRI 19 APR 1940

See HKg. J.C. 8541



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Date of writing R

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