

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 10,522

Date of writing Report 10th MAY 1941 When handed in at Local Office 26th MAY 1941 Port of MANCHESTER
 Date, First Survey 25. FEB. 1941 Last Survey 3. MAY 1941
 Number of Visits 2

Single Triple Quadruple on the Fun Screw Motor vessel "EMPIRE LAD"
 Tons { Gross 298
 Net

built at Roskedge By whom built ROXHEDGE IRONWORKS CO. Yard No. 601 When built 1941
 Port belonging to Ministry of War Transport
 Engines made at MANCHESTER By whom made L. GARDNER & SONS LTD ENGINE Contract No. 52071 When made 1941
 Generators made at SUNDERLAND By whom made SUNDERLAND FORGE CO GENERATOR Contract No. F8703 When made 1941
 No. of Sets ONE Engine Brake Horse Power 9.5 Nom. Horse Power as per Rule 2.7 Total Capacity of Generators 5 Kilowatts.

L ENGINES, &c.—Type of Engines VERTICAL SOLID INJECTION 2 or 4 stroke cycle 4 Single or double acting SINGLE
 Maximum pressure in cylinders 650 LBS Diameter of cylinders 4.25" Length of stroke 6 No. of cylinders ONE No. of cranks ONE
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5.125" (5 1/8") Is there a bearing between each crank -
 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 APPROVED 2 5/8" Crank pin dia. 2 5/8" Crank Webs Mid. length breadth 4" Thickness parallel to axis SOLID
 as fitted 2 5/8" Mid. length thickness 1 3/8" Thickness around eye-hole

Intermediate Shafts, diameter as per Rule - as fitted - Thickness of cylinder liners .096"
 Is there 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 Is the sea suction provided with an efficient strainer which can be cleared within the vessel -
 Lubricating Oil Pumps, No. and size ONE 1 3/16" DIA x 1/2" STROKE APPROX. 28 G.P.H.
 Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
 Sucking Air Pumps, No. - Diameter - Stroke - Driven by -

R 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 45.5 Amperes. Direct or Alternating Current DIRECT
 Is 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 generators, are they compounded as per rule YES Is an adjustable regulating resistance fitted in series with each output 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 - Are the lubricating arrangements of the generators as per Rule YES
 Do 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
 Do the generators are 100 kw. or over have they been built and tested under survey -

Are approved plans forwarded herewith for Shafting 3.4.41 Receivers - Separate Tanks -
 (If not, state date of approval)
SHAFTING AS PER RULE REQUIREMENTS

The foregoing is a correct description,
L. GARDNER & SONS LTD.
 William Gardner Manufacturer.
 Director.

Dates of Survey while building { During progress of work in shops - - } 1941 FEB 25. MAY 3
 { During erection on board vessel - - - } 2
 Total No. of visits

Dates of Examination of principal parts—Cylinders 25.2.41. Covers 25.2.41. Pistons 25.2.41 Piston rods—
 Connecting rods 25.2.41 Crank and Flywheel shafts 25.2.41 Intermediate shafts —
 Crank and Flywheel shafts, Material O.H. STEEL Identification Marks LLOYDS 462 M. 29-11-4
 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. COPY OF GENERATOR TEST CERTIFICATE IS ATTACHED.

The amount of Fee ... £ 3 : 3 : 0 } When applied for, 26.5.41 M.
 Travelling Expenses (if any) £ : 7 : 0 } When received, 19.....

Reicester
 Surveyor to Lloyd's Register of Shipping.

FRI. 9 JAN 1942

Committee's Minute

Assigned.

See G.O. p.e. machinery r/H 110020



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