

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 10,523.

Received at London Office 28 MAY 1941

Date of writing Report 10 May 41 When handed in at Local Office 26 May 41 Port of MANCHESTER.
 No. in Survey held at Reg. Book. MANCHESTER. Date, First Survey 5 APRIL 1941. Last Survey 3 MAY 1941
 Number of Visits 2

on the ^{Single} ~~Triple~~ ^{Motor} ~~Screw~~ vessel "EMPIRE LAD"
 Built at ^{Quadruple} ~~Rowhedge~~ By whom built ROWHEDGE IRONWORKS LTD. Yard No. 601. When built 1941.
 Owners Ministry of War Transport Port belonging to
 Oil Engines made at MANCHESTER. By whom made L. GARDNER & SONS LTD. Contract No. 52574. When made 1941.
 Generators made at By whom made Contract No. When made
 No. of Sets TWO. Engine Brake Horse Power 38. ^{Total for 2 engs.} Nom. Horse Power as per Rule 11. ^{Total} Total Capacity of Generators Kilowatts.

OIL 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 TWO EACH ENGINE No. of cranks TWO EACH ENGINE.
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5.76" 5.8" Is there a bearing between each crank YES.
 Revolutions per minute 1000 Flywheel dia. 22" Weight 304 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" Mid. length thickness 1 3/8" Thickness parallel to axis SOLID. Thickness around eye-hole
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners .096"
 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 Is the sea suction provided with an efficient strainer which can be cleared within the vessel
 Lubricating Oil Pumps, No. and size ONE (EACH ENGINE) GEAR WHEEL TYPE. APPROX 720 S.P.H.
 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
 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 volts. Full Load Current Amperes. Direct or Alternating Current
 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
 Generators, are they compounded as per rule 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 Are the lubricating arrangements of the generators as per Rule
 If the generators are under 100 kw. full load rating, have the Makers supplied certificates of test and do the results comply with the requirements
 If the generators are 100 kw. or over have they been built and tested under survey

PLANS. Are approved plans forwarded herewith for Shafting YES Receivers Separate Tanks
 (If not, state date of approval)
 SPARE GEAR As Per Rule REQUIREMENTS.

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

William Gardner Manufacturer.
 Director.



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Lloyd's Register

012542-012548-0020

012542-012548-006

Dates of Survey while building { During progress of work in shops - - 1941 APRIL 5. MAY 3. During erection on board vessel - - - 2 Total No. of visits 2

Dates of Examination of principal parts—Cylinders 5.4.41. Covers 5.4.41. Pistons 5.4.41. Piston rods — Connecting rods 5.4.41. Crank and Flywheel shafts 5.4.41. Intermediate shafts — Crank and Flywheel shafts, Material O.H. Ingot Steel. Identification Marks 420405 2OFF. 5472. JAL 18.3.41 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.)

THESE ENGINES HAVE BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND ARE IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE OF A GOOD QUALITY AND THE ENGINES WHEN TESTED IN SHOP UNDER FULL LOAD CONDITIONS SHewed SATISFACTORY RESULTS. IN MY OPINION THESE ENGINES ARE SUITABLE TO BE PLACED ON BOARD A VESSEL, CLASSED WITH THIS SOCIETY, FOR THE PURPOSE INTENDED.

The amount of Fee ... £ 6 : 6 : 0 When applied for, 265 19 41 JAL. Travelling Expenses (if any) £ : 6 : 0 When received, 19.....

Committee's Minute

FRI. 9 JAN 1942

Assigned

See Sp. for machy rpt. 110020

J. A. Meinte.
Surveyor to Lloyd's Register of Shipping.



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Foundation