

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13098.

Date of writing Report 3rd December, 1947 When handed in at Local Office 12th December, 1947 Received at London Office 23 DEC 1947
No. in Survey held at MANCHESTER Port of MANCHESTER
Reg. Book. MANCHESTER Date, First Survey 1st October, 1947 Last Survey 14th November, 1947
Single on the Twin Triple Quadruple Screw vessel. Number of Visits 4
Built at Ardrossan By whom built Ardrossan Dockyard Co. Yard No. 404 When built 1947
Owners MANCHESTER Port belonging to MANCHESTER
Oil Engines made at Patricroft By whom made L. Gardner & Sons Ltd. Engine No. 73137 When made 1947
Generators made at Liverpool By whom made Campbell & Isherwood Ltd. Generator No. 36754 When made 1947
No. of Sets 1 Engine Brake Horse Power 99 M.N. as per Rule 24.75 Total Capacity of Generators 64 Kilowatts.
Is Set intended for essential services.

OIL ENGINES, &c.—Type of Engines Vertical Airless Injection Heavy Oil 2 or 4 stroke cycle 4 Single or double acting Single
Maximum pressure in cylinders 850 lbs per sq. inch Diameter of cylinders 5 1/2" Length of stroke 7 3/4" No. of cylinders 6 No. of cranks 6
Mean indicated pressure 120 lbs per sq. inch Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6.15/16"
Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg-cm²) 1027 lbs per sq. ft. Revolutions per minute 800
Flywheel dia. 32" Weight 853 lbs Means of ignition Compression Kind of fuel used Diesel Oil
Crank Shaft, dia. of journals 4 1/8" as per Rule Approved Crank pin dia. 3 5/8" Crank Webs 5 1/2" Mid. length thickness 1.11/16" Thickness parallel to axis 292 lbs per sq. ft.
Flywheel Shaft, diameter 2 1/2" as per Rule Approved Intermediate Shafts, diameter 2 1/2" as per Rule Approved General armature moment of inertia (16 m² or Kg-cm²) 292 lbs per sq. ft.
Are means provided to prevent racing of the engine when declutched Yes Means of lubrication Forced Kind of damper if fitted Spring Loaded Friction type
Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Water cooled Exhaust Manifold
Cooling Water Pumps, No. Ram Type Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

Lubricating Oil Pumps, No. and size One Intregal with Engine
Air Compressors, No. None No. of stages None Diameters None Stroke None Driven by None

Scavenging Air Pumps, No. None Diameter None Stroke None Driven by None

AIR RECEIVERS:—Have they been made under Survey None State No. of Report or Certificate None

Is each receiver, which can be isolated, fitted with a safety valve as per Rule None

Can the internal surfaces of the receivers be examined None What means are provided for cleaning their inner surfaces None

Is there a drain arrangement fitted at the lowest part of each receiver None

High Pressure Air Receivers, No. None Cubic capacity of each None Internal diameter None thickness None

Seamless, lap welded or riveted longitudinal joint None Material None Range of tensile strength None Working pressure by Rules None

Starting Air Receivers, No. None Total cubic capacity None Internal diameter None thickness None

Seamless, lap welded or riveted longitudinal joint None Material None Range of tensile strength None Working pressure by Rules None

ELECTRIC GENERATORS:—Type Compound Wound Continuous Rating

Pressure of supply 220 volts. Full Load Current 290 Amperes. Direct or Alternating Current Direct Current

If alternating current system, state the periodicity None 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 None

Details of driven machinery other than generator None

PLANS.—Are approved plans forwarded herewith for Shafting Approved 30.4.46 Receivers None Separate Tanks None

Have Torsional Vibration characteristics if applicable been approved None Armature shaft Drawing No. None

SPARE GEAR AS PER RULE REQUIREMENTS

The foregoing is a correct description,
For and on behalf of
L. GARDNER & SONS LTD.,

Manufacturers



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Lloyd's Register
Foundation

002846-002852-0168

Dates of Survey while building **1947. Oct. 1, 2, 6. Nov. 14.**
 Dates of Examination of parts: **6.10.47. 2 & 6.10.47. 1.10.47.**
 Connecting rods: **1.10.47. 26.5.47.**
 Material: **0.H. Steel.** 39.2 Tons per sq. inch.
 Crank shaft: **27%** **LLOYD'S 0.404, 26.5.47. R.J.Y.**
 Flywheel shaft: Material **VERV**
 Identification marks: **XXXXXX**

Is this machinery dependent on a piston rod? **No.**
GENERAL REMARKS: This engine has been constructed under special survey of tested materials in accordance with the Secretary's letters, approved plans and Requirement of the Rules. Materials and workmanship are good and the engine when tested in the shop under full load conditions gave satisfactory results. The engine in my opinion, is suitable for fitting on board a vessel to be classed with this Society.

Particulars of the Crankshaft will be found in Manchester Certificate No. 0.5820 dated 3.6.47.

Water cooled Exhaust Manifold
 Forced
 Yes
 No
 Ram Type
 One Inlet with Engine
 Compound Wound Condenser Cooling
 Direct Current
 Approved 30.4.48

The amount of Fee ... £ **4 10 : 0.** When applied for 19
 Travelling Expenses (if any) £ : : When received 19

Committee's Minute
 Assigned

R. J. Y. Oulton
 Surveyor to Lloyd's Register of Shipping

