

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13099.

Date of writing Report 6th November, 47. 19th December, 1947. Received at London Office 23 DEC 1947
 When handed in at Local Office 13th December, 1947. Port of MANCHESTER.

No. in Survey held at MANCHESTER. Date, First Survey 19th Dec., 1946. Last Survey 3rd November, 1947.
 Reg. Book. Number of Visits 5.

Single or Double Acting
 Triple or Quadruple
 Screw vessel. Tons { Gross
 Net

Built at Ardrossan. By whom built Ardrossan Dockyard Co. Yard No. 404. When built 1947.

Owners. Port belonging to

Oil Engines made at Patricroft. By whom made L. Gardner & Sons. Engine No. 73136. When made 1947.

Generators made at Liverpool. By whom made Campbell & Isherwood. Generator No. 36587. 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 crank and flywheel? Yes. Moment of inertia of flywheel (16 m² or Kg.-cm.²) 1027 lbs per sq. ft. 800.

Flywheel dia. 32". Weight 853 lbs. Means of ignition Compression. Kind of fuel used Diesel Oil.

Crankshaft dia. of journals 4 1/8". Crank pin dia. 3 5/8". Crank Webs Mid. length breadth 5 1/2". Thickness parallel to axis 1 11/16".

Flywheel Shaft, diameter as per Rule. Intermediate Shafts, diameter as per Rule. General armature, moment of inertia (16 m² or Kg.-cm.²) 292 lbs per sq. ft.

Are means provided to prevent racing of the engine when disengaged? 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 integral with engine.

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.

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

Details of driven machinery other than generator

PLANS.—Are approved plans forwarded herewith for Shafting? Approved 30.4.46. Receivers. Separate Tanks.

Have Torsional Vibration characteristics if applicable been approved? Armature shaft Drawing No.

SPARE GEAR AS PER RULE REQUIREMENTS.

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

RE Jones

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Date of Survey 1946. 19th December. 1947. 1, 2, 6 October. 3rd November.
 Date of Examination of engine and parts 19.12.46. 1&2.10.47. 1.10.47.
 Connecting rods 1.10.47. 26.5.47.
 Crank shaft 33% 33.6 Tons per sq. inch.
 Material 33% 33.6 Tons per sq. inch.
 Engine 33% 33.6 Tons per sq. inch.
 Material 33% 33.6 Tons per sq. inch.
 Location 33% 33.6 Tons per sq. inch.

This engine has been constructed under special survey of tested materials in accordance with the Secretary's letters, approved plans and Requirements 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 Yes.
 Forced type Yes.
 One integral with engine.

Compound Working Continuous Rating 250
 Direct Current 250
 Yes.
 Yes.
 Yes.

The amount of Fee 4 10 0.
 Travelling Expenses 10

(The Surveyors are requested not to write or sign or delay the entry for Committee Minutes)

Committee's Minute 29 JUN 1948
 Assigned

