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JUN 1946

pt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

AIR COMPRESSOR

No. 12565

Received at London Office

5 JUN 1946

Date of writing Report **24th May 1946**. When handed in at Local Office **3rd June 1946**. Port of **MANCHESTER**.

No. in Survey held at **Altrincham**. Date, First Survey **20th March, 1946**. Last Survey **27th April, 1946**.  
Reg. Book. **5** Number of Visits **5**

on the **Single** **Empire Tedrita** **Screw vessel**.  
Tons **890** Gross **370** Net  
**1311 P to 1314 P**  
Built at **Glasgow**. By whom built **A. & J. Inglis**. Yard No. **1956** When built **1946**

Engines made at **Altrincham**. By whom made **Russell Newbery & Co. Ltd.** Engine No. **3981** When made **1946**  
Generators made at **Stockport**. By whom made **Mc Clure & Whitfield Ltd.** Generator No. **10521** When made **1946**  
No. of Sets **1** Engine Brake Horse Power **36** Nom. Horse Power as per Rule **9** Total Capacity of Generators **18** Kilowatts

TYPE OF ENGINES, &c.—Type of Engines **Vertical, Solid Injection, Heavy Oil** or 4 stroke cycle **4** Single or double acting **single**  
Maximum pressure in cylinders **860 lbs per sq. inch.** Diameter of cylinders **4 1/8"** Length of stroke **6"** No. of cylinders **4** No. of cranks **4**  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **5 1/8"** Is there a bearing between each crank **Yes**  
Revolutions per minute **1000** Flywheel dia. **22"** Weight **263 lbs.** Means of ignition **Compression** Kind of fuel used **Diesel Oil**

Crank Shaft, dia. of journals **2 1/2"** as per Rule **Approved** Crank pin dia. **2 3/8"** Crank Webs **3 1/2"** Mid. length breadth **1 5/16"** Thickness parallel to axis **1 5/16"**  
Flywheel Shaft, diameter **11/32"** as per Rule **Intermediate Shafts, diameter** as per Rule **Thickness of cylinder liners** **11/32"**

Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched **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 **Yes**  
Cooling Water Pumps, No. **One-Plunger type** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **Yes**  
Lubricating Oil Pumps, No. and size **One-gear type**  
Air Compressors, No. **No. of stages** **Diameters** **Stroke** **Driven by**

Engaging Air Pumps, No. **Diameter** **Stroke** **Driven by**

AIR RECEIVERS:—Have they been made under Survey **Yes** State No. of Receivers or Certificate **28646**  
Is each receiver, which can be isolated, fitted with a safety valve as per Rule **Yes**  
Can the internal surfaces of the receivers be examined **Yes** What means are provided for cleaning the internal surfaces **Yes**  
Is there a drain arrangement fitted at the lowest part of each receiver **Yes**

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**  
Lifting 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 V.E. Louvred type**  
Pressure of supply **110 volts** Full Load Current **163 1/2** Amperes Direct or Alternating Current **Direct**  
Is an 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 **Yes**  
Are the generators 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 **Yes**

PLANS.—Are approved plans forwarded herewith for Shafting **1st September, 1944** Receivers **Separate Tanks**  
(If not, state date of approval)  
SHAFTING **AS PER RULE REQUIREMENTS**

The foregoing is a correct description,

per pro. **RUSSELL, NEWBERY & Co. Ltd.**

Manufacturer

DIRECTOR



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Lloyd's Register Foundation

014484-014485-0111



Dates of Survey while building  
During progress of work in shops - -  
During erection on board vessel - -  
Total No. of visits

1946, March 20, 29, 30. April 12, 27.

Dates of Examination of principal parts - Cylinders 29.3.46. Covers 29.3.46. 20.3.46. Pistons 12.4.46. Piston rods -

Connecting rods 12.4.46. Crank and Flywheel shafts 30.3.46. Intermediate shafts -

Material O.H. Steel Tensile strength 39.6 tons per sq. inch.

Elongation 29% on 2" Identification Marks LLOYD'S 3434 WJF. 23.8.45.

Proposed shaft, Material Identification Marks

Is this machinery duplicate of a previous case Yes. Identification Marks

Identification marks on ~~XXXXXX~~ Generator No. 10521.

Hamworthy Air Compressor No. 69011.

Is this machinery duplicate of a previous case Yes. If so, state name of vessel Manchester Rpt. No. 12480 (same contract).

GENERAL REMARKS (state quality of workmanship, opinions as to class, etc.) This engine has been built under special survey, of tested materials, and is in accordance with Secretary's letters, approved plans and Rule Requirements. Materials and workmanship are of good quality and the engine, when tested in the shop under full load conditions, showed satisfactory results. In my opinion, this engine is suitable to be placed on board a vessel classed with this Society for the purpose intended.

The Air Compressor has been made under British Corporation Survey, and this fact is noted and Approved in Secretary's letter of 9.5.46. The Secretary Glasgow has been advised.

The amount of Fee ... £ 4 : 4 : 0 When applied for 3/6/46 19

Travelling Expenses (if any) £ 16 : 8 When received 19

Committee's Minute GLASGOW 24 SEP 1946

Assigned SEE ACCOMPANYING MACHINERY REPORT.