

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13461.

of writing Report 25th November, 48. When handed in at Local Office 8th December, 48. Received at London Office 10 DEC 1948  
Port of MANCHESTER.  
Survey held at MANCHESTER. Date, First Survey 23rd March, 1948 Last Survey 17th November, 48.  
Number of Visits 6.  
Classed Vessel.  
Tons { Gross  
Net  
By whom built Halifax Shipyards Ltd. Yard No. 18. When built  
Argentine Government. Port belonging to Buenos Aires.  
Engines made at Altrincham. By whom made Russell Newbery & Co. Ltd., Engine 4176  
When made 1948.  
Contract No. 4177  
When made  
Engine Brake Horse Power 18 each. M.N. as per Rule 4.5 each. Total Capacity of Generators Kilowatts.  
Let intended for essential services.

Vertical Solid Injection Heavy Oil. 2 or 4 stroke cycle 4. Single or double acting single.  
Maximum pressure in cylinders 850 lbs/sq.inch. Diameter of cylinders 4.1/8" Length of stroke 6" No. of cylinders 2 x 2 No. of cranks 2 x 2.  
Indicated pressure 105 lbs/sq.inch. Firing order in cylinders 2, 1. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5.1/8".  
Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)  
Revolutions per minute 1,000.  
Weight 345 lbs. Means of ignition Compression. Kind of fuel used Diesel Oil.  
Crank pin dia 2.3/8" Crank Webs Mid. length breadth 3.1/2" Thickness parallel to axis  
Mid. length thickness 1.5/16"shrunk Thickness round eyehole  
Flywheel fitted on end of crankshaft.  
General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)

Means provided to prevent racing of the engine when declutched Yes. Means of lubrication Forced. Kind of damper if fitted  
Cylinders fitted with safety valves No. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material.  
Cooling Water Pumps, No. Two 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 (Gear Type).  
Compressors, No. No. of stages Diameters Stroke Driven by  
Sucking Air Pumps, No. Diameter Stroke Driven by

RECEIVERS:—Have they been made under Survey. State No. of Report or Certificate.  
Each receiver, which can be isolated, fitted with a safety valve as per Rule.  
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.  
Sucking 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  
Voltage of supply volts. Full Load Current Amperes. Direct or Alternating Current  
Alternating current system, state the periodicity. Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown  
and off. Generators, are they compounded as per Rule. is an adjustable regulating resistance fitted in series with each shunt field.  
All terminals accessible, clearly marked, and furnished with sockets. Are they so spaced  
shielded that they cannot be accidentally earthed, short circuited, or touched. Are the lubricating arrangements of the generators as per Rule.  
The generators are under 100 kw. full load rating, have the makers supplied certificates of test. and do the results comply with the requirements.  
The generators are 100 kw. or over have they been built and tested under survey.  
Shafts of driven machinery other than generator.

ANS.—Are approved plans forwarded herewith for Shafting 18th Feb., 1948. Receivers Separate Tanks  
(If not, state date of approval)  
Torsional Vibration characteristics if applicable been approved. Armature shaft Drawing No.  
(state date of approval)

ARE GEAR AS PER RULE REQUIREMENTS.

The foregoing is a correct description,  
RUSSELL NEWBERY & Co. Ltd. Manufacturer.  
J. C. Russell DIRECTOR



4<sup>c</sup> 13461.

Dates of Survey while building During progress of work in shops - - 1948. 23 March. 25 May. 24 Aug., 2 Sept. 10 & 17 Nov.  
During erection on board vessel - -  
Total No. of visits

Dates of Examination of principal parts—Cylinders 2.9.48. Covers 24.8.48. Pistons 2.9.48. Piston rods  
Connecting rods 2.9.48. Crank and Flywheel shafts Intermediate shafts

Crank shaft Material O.H. Steel. Tensile strength 4906, 42 Tons/sq.in. 5297 39.6  
Elongation 4906. 27% on 2". 5297, 26% on 2". Identification Marks Lloyd's 4906 R.J.Y. 23.3.48  
5297 R.J.Y. 25.5.48

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers

Is this machinery duplicate of a previous case Yes. If so, state name of vessel Halifax Shipyards Yard No. 17, Mch. Rpt. No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These engines have been constructed under special survey of tested materials in accordance with the Secretary's letters, approved plans and Rule Requirements. Materials and workmanship are good and, when tested in the shop under full load conditions, coupled direct to an electric dynamometer, showed satisfactory results.

In my opinion, these engines are suitable for installation on board a vessel to be classed with this Society, for the purpose intended.

The engines have been despatched to Canada, where they will be coupled to a Reavell Type A Compressor.

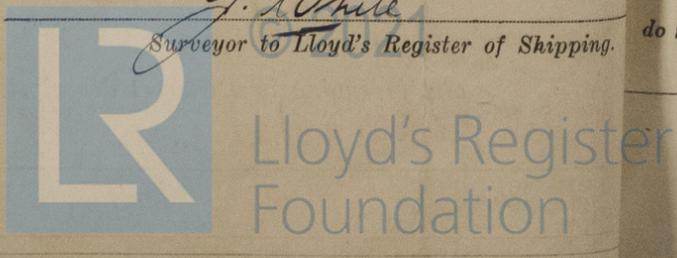
Forging Report No.F.5383 attached herewith.

The amount of Fee ... £ 8 : 0 : 0. When applied for 2/12/48  
Travelling Expenses (if any) £ - : 15 : 0. When received 19

Committee's Minute FRI, 29 SEP 1950

Assigned See minute on S.C.Rpt.

J. White  
Surveyor to Lloyd's Register of Shipping.



20.8.17.-T. (MADE AND PRINTED IN ENGLAND)  
(The Surveyors are requested to sign on or below the space for Committee Minute.)