

# REPORT ON OIL ENGINE/ELECTRIC GENERATOR SETS.

AUXILIARY

No. 8002

Received at London Office - 6 MAR 1934

Date of writing Report 3<sup>rd</sup> March 1934 When handed in at Local Office 5<sup>th</sup> March 1934 Port of Manchester  
No. in Survey held at Manchester Date, First Survey 1<sup>st</sup> Feb. 1934 Last Survey 14<sup>th</sup> Feb. 1934  
Reg. Book. Number of Visits 3

on the Single Twin Triple Quadruple Screw vessel Tons Gross Net  
Built at RENFREW By whom built WM. SIMONS Yard No. 704 When built

Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
Oil Engines made at MANCHESTER By whom made L. GARDNER & SONS Contract No. 31248 When made 1934

Generators made at \_\_\_\_\_ By whom made \_\_\_\_\_ Contract No. \_\_\_\_\_ When made \_\_\_\_\_  
No. of Sets ONE Engine Brake Horse Power 38 Nom. Horse Power as per Rule 10.8 Total Capacity of Generators 24 Kilowatts.

OIL ENGINES, &c.—Type of Engines Vertical, airless injection cold 2 or 4 stroke cycle 4 Single or double acting Single  
Maximum pressure in cylinders 650-lbs Diameter of cylinders 4 1/4" 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 7/16" Is there a bearing between each crank Yes

Revolutions per minute 1000 Flywheel dia. 26" Weight 511-lbs Means of ignition Compression Kind of fuel used Heavy oil  
Crank Shaft, dia. of journals as per Rule 2 1/2" as fitted 2 5/8" Crank pin dia. 2 5/8" Crank Webs Mid. length breadth 4" Thickness parallel to axis 50-lbs  
Mid. length thickness 1 3/8" shrunk Thickness around eye-hole \_\_\_\_\_

Flywheel Shaft, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Intermediate Shafts, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Thickness of cylinder liners Solid Cylinder  
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 Rotary Gear Type

Air Compressors, No. ✓ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
Scavenging Air Pumps, No. ✓ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_

AIR RECEIVERS:—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. Load \_\_\_\_\_ Amperes. Direct or Alternating Current \_\_\_\_\_  
If alternating current system, state frequency of periods per second \_\_\_\_\_

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off \_\_\_\_\_  
Generators, do they comply with the requirements regarding rating \_\_\_\_\_ are they compound wound \_\_\_\_\_  
are they over compounded 5 per cent. \_\_\_\_\_, if not compound wound state distance between each generator \_\_\_\_\_

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 \_\_\_\_\_

PLANS. Are approved plans forwarded herewith for Shafting Yes Receivers ✓ Separate Tanks Yes  
SHAFTING. Are approved plans forwarded herewith for Shafting Yes Receivers ✓ Separate Tanks Yes

SPARE GEAR One piston assembly, 1 Exhaust set of piston rings, 1 scraper assembly  
1 pair crank pin bushes, 1 piston pin and pad, 1 piston pin bush, 1 Camshaft chain  
1 Fuel pump tappet, 1 Set of Springs, 1 Exhaust valve complete with springs  
1 Inlet valve complete with spring, 1 pair main bearings (flywheel end), 1 pair  
main bearings (for shaft), 1 pair main bearings (inlet), 1 set of Bosch Fuel Pump parts.  
1 Regulating sleeve, 1 Delivery valve spring.

The foregoing is a correct description,  
L. GARDNER & SONS, LIMITED,  
William Gardner, Manufacturer.  
DIRECTOR.  
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W6-0145

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

1<sup>st</sup>, 8<sup>th</sup>, 14<sup>th</sup> Feb 1934

Dates of Examination of principal parts—Cylinders 8-2-34 Covers 1-2-34 Pistons 8-2-34 Piston rods ✓  
 Connecting rods 8-2-34 Crank and Flywheel shaft 8-2-34 Intermediate shaft ✓

Crank and Flywheel shaft, Material Mild Steel Identification Mark <sup>LLOYD'S</sup> No 3464 A Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) This auxiliary engine, Messrs L. Gardner & Son Ltd, type 4-L-2, has been built under special survey and the materials tested in accordance with the Rules. The materials so far as can be seen are sound and the workmanship is good. This engine connected to a 24KW (104amp 220/230 volts) Generator No F151A206 manufactured by Messrs Crompton & Parkinson and supplied by Messrs J. Charter & Co, Glasgow, has been satisfactorily tested under full load in the shop & found satisfactory.

George Anderson  
 Surveyor to Lloyd's Register of Shipping.

The amount of Fee ... £ 4 : 4 : 5<sup>th</sup> Mar 1934

Travelling Expenses (if any) £ ✓ 5/4/34

FRI. 19 OCT 1934

FRI. 12 OCT 1934

Committee's Minute

See Reg Rpt 873

Assigned



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Im730—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)