

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 122.

pt. 4c.  
D.O.

Received at London Office 29 MAR 1945

Date of writing Report 22-3-45 19 When handed in at Local Office 26-3- 19 45 Port of LEEDS.  
 No. in Survey held at LEEDS Date, First Survey 6-7-44 Last Survey 21-3- 19 45  
 Reg. Book. Number of Visits 4

on the <sup>Single</sup> ~~Triple~~ ~~Quadruple~~ Screw vessel "EMPIRE GUERNSEY"  
 (Admiralty Contract No. C.P. (M.S.) 2204/43) Tons { Gross  
 Net

Built at Knottingley By whom built John Harker Ltd. Yard No. 168 When built  
 Owners Port belonging to

Oil Engines made at Leeds By whom made John Fowler Ltd. Contract No. C.P. (M.S.) 2204/43 When made 1945  
 Generators made at Manchester By whom made Lancashire Dynamo Ltd. Contract No. -do- When made 1945

No. of Sets One Engine Brake Horse Power 20 Nom. Horse Power as per Rule 6 Total Capacity of Generators 10 Kilowatts.

OIL ENGINES, &c. Type of Engines Heavy Oil Engine 2 or 4 stroke cycle 4 Single or double acting Single  
 Maximum pressure in cylinders 900 ✓ Diameter of cylinders 4 1/2 ✓ Length of stroke 6 1/2 ✓ No. of cylinders 2 ✓ No. of cranks Two ✓  
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 12.5/16" Is there a bearing between each crank No.

Revolutions per minute 1100 ✓ Flywheel dia. 20 1/8" Weight 500 Lbs Means of ignition Compression Kind of fuel used Heavy Oil  
 Crank Shaft, dia. of journals as per Rule Approved as fitted 3 1/2" Crank pin dia. 3 1/2" Crank Webs Mid. length breadth 4 1/2" ✓ Thickness parallel to axis -  
 Mid. length thickness Side 1 1/2" ✓ shrunk Thickness around eye-hole -  
 Centre 3.23/32" ✓

Flywheel Shaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule - as fitted - Thickness of cylinder liners 17/64"  
 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 No.  
 Cooling Water Pumps, No. Radiator with Circ. Pump Is the sea suction provided with an efficient strainer which can be cleared within the vessel -

Lubricating Oil Pumps, No. and size One Geared Type - Capacity 5 1/2/6 Galls. per min.  
 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 Not supplied 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 D.30.A. Compound Wound Interpole. Drip Proof.

Pressure of supply 110 Volts. Full Load Current 91.0 ✓ Amperes. Direct or Alternating Current Direct ✓  
 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 - 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 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 -  
 PLANS. Are approved plans forwarded herewith for Shafting 8-10-43 ✓ Receivers - Separate Tanks -

THE SPARE GEAR As per Rule requirements.  
 The Engine and Generator are mounted on a fabricated steel baseplate.

The foregoing is a correct description,  
 FOR JOHN FOWLER & CO. (LEEDS)

*E.D. Ellis*  
 CHIEF ENGINEER.

Manufacturer.



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Lloyd's Register  
 Foundation

01186-01196-0187

\*Dates of Survey while building { During progress of work in shops - - } 6-7-44, 17-11-44, 20-11-44 and 21-3-45.  
 { During erection on board vessel - - - }  
 Total No. of visits

Dates of Examination of principal parts—Cylinders 20-11-44 Covers 20-11-44 Pistons 17-11-44 Piston rods -  
 Connecting rods 6-7-44 Crank and Flywheel shafts 12-4-44 Intermediate shafts -  
 Crank and Flywheel shafts, Material Siemens Forged Steel Identification Marks LLOYD'S J.2545 758/5.  
 Intermediate shafts, Material - Identification Marks  
 Identification marks on Air Receivers -

Is this machinery duplicate of a previous case See Below If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

This Engine No. 2010027 has been constructed under special survey of tested materials, in accordance with the Secretary's letters, approved plans and the requirements of the Rules.

The materials and workmanship are good and the engine was found to be satisfactory when tested in the shops under full load conditions.

The Generator No. 198654 was approved by the Manchester Surveyors at the Makers Works - Messrs. Lancashire Dynamo & Crypto Ltd.

The set was finally examined under running conditions with the engine and generator mounted on the common baseplate.

This diesel engine driven electric generator set is suitable, in my opinion, for the purpose intended and when satisfactorily installed and reported will be eligible to receive the notation **L.M.C.** (with date).

NOTE: - The engine and generator are duplicates of those supplied to the Vessels CHANT 66 and 67; the air compressor, included with the machinery in the latter vessels being omitted in this case on instructions issued by the Admiralty.

The above engine & generator installed on board "Empire Guernsey" at Goole - see Hull report no. 52939.  
 W.G. Cornish

Im 4.89.—Transfer. (MADE AND PRINTED IN ENGLAND)  
 (The Surveyors are requested not to write on or below the space for Committee Minute.)

The amount of Fee ... ..	£ 5 : 5 :	When applied for, 21-3-1945
Travelling Expenses (if any) £	:	When received, 19.....

*D. Waller*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 18 JUL 1945  
 Assigned *As now*

