

Rpt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 72995

30 JUN 1948

Received at London Office

Date of writing Report 22<sup>o</sup> June 1948 When handed in at Local Office \_\_\_\_\_ 19\_\_\_\_ Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 14. 1. 48 Last Survey 30. 4. 1948  
Reg. Book. \_\_\_\_\_ Number of Visits 5

30377 on the Single Screw vessel M.S. "OAKMORE" Tons { Gross 4700  
Triple Net 2662  
Quadruple

Built at Endon By whom built Henderson & Co. Endon, 466, West Yard No. \_\_\_\_\_ When built 1939

Owners Johnston & Warr Limited (London City Ltd) Port belonging to London

Oil Engines made at Glasgow By whom made British Polar Engines Ltd Contract No. 511400 When made 1948

Generators made at Chelmsford By whom made Crompton Parkinson Ltd Contract No. \_\_\_\_\_ When made \_\_\_\_\_

No. of Sets 1 Engine Brake Horse Power 230 M.N. as per Rule 57.5 Total Capacity of Generators 150 Kilowatts.

Is Set intended for essential services Bruney, Borneo

OIL ENGINES, &c.—Type of Engines Heavy oil K.S.H.E. type 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 925 lb./sq. in. Diameter of cylinders 180 7/8 Length of stroke 300 7/8 No. of cylinders 4 No. of cranks 4

Mean indicated pressure 100 lb. Firing order in cylinders 1. 4. 2. 3. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 222 7/8

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 240 lb. in. sq. Revolutions per minute 600

Flywheel dia. 800 7/8 Weight 630 lb. Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals 113 7/8 as per Rule 120 7/8 as fitted Crank pin dia. 125 7/8 Crank Webs Mid. length breadth 230 7/8 Thickness parallel to axis \_\_\_\_\_

Flywheel Shaft, diameter 115 7/8 as per Rule 125 7/8 as fitted Intermediate Shafts, diameter \_\_\_\_\_ as per Rule \_\_\_\_\_ as fitted General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 268 lb. in. sq.

Are means provided to prevent racing of the engine when declutched Yes Means of lubrication Lubricated Kind of damper if fitted None

Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Yes

Cooling Water Pumps, No. One - 700 Gallons / Hour Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size One - 900 Gallons / Hour

Air Compressors, No. \_\_\_\_\_ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_

Scavenging Air Pumps, No. Blower Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by M.E.

AIR RECEIVERS:—Have they been made under Survey None 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 Oil Proof

Pressure of supply 220 volts. Full Load Current 682 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 \_\_\_\_\_ 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 \_\_\_\_\_ and do the results comply with the requirements \_\_\_\_\_

If the generators are 100 kw. or over have they been built and tested under survey Yes

Details of driven machinery other than generator \_\_\_\_\_

PLANS.—Are approved plans forwarded herewith for Shafting \_\_\_\_\_ Receivers \_\_\_\_\_ Separate Tanks \_\_\_\_\_

Have Torsional Vibration characteristics if applicable been approved See letter 17/2/47 Armature shaft Drawing No. \_\_\_\_\_

SPARE GEAR As per attached list

BRITISH POLAR ENGINES LIMITED  
The foregoing is a correct description,

*J. M. Watson*  
J. M. Watson  
GENERAL MANAGER

Manufacturer.

(J. M. Watson)  
GENERAL MANAGER  
"E" FACTORY

4pt. dir.  
22/7/48



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Lloyd's Register  
Foundation

004466-004476-0363

Dates of Survey while building  
 During progress of work in shops - 14. 21. Jan. 13th. Feb. 3rd. Apr. 1948  
 During erection on board vessel - - -  
 Total No. of visits 5 Visits

Dates of Examination of principal parts—Cylinders 14. 1. 48 Covers 21. 1. 48 Pistons 21. 1. 48 Piston rods 21. 1. 48

Connecting rods 21. 1. 48 Crank and Flywheel shafts 16. 2. 48 Intermediate shafts ✓

Crank shaft { Material O.H. Steel Tensile strength 36.0 Ton/0  
 Elongation 30.0% on 3" Identification Marks 16905 H.A.I. 14.11.47. ✓

Flywheel shaft, Material ✓ Identification Marks ✓

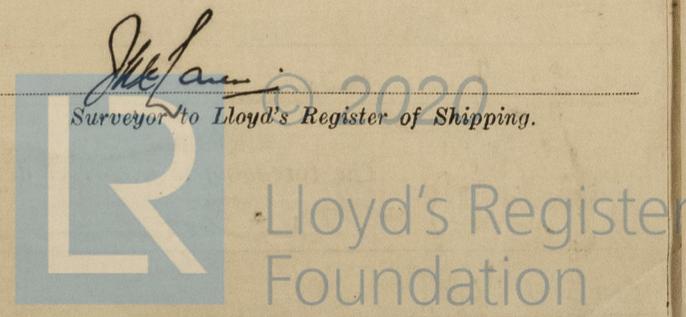
Identification marks on Air Receivers none supplied.

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 has been built under special Survey and in accordance with the Rules and approved the materials used and workmanship as good.  
 On completion the engine coupled to the Generator was tested on the bench at the engine builders works at full and overload with satisfactory results.  
 The engine and generator has now been dispatched to Messrs Russell & Co Liverpool to be installed on board the M.V. "Dakota"  
 Torsional Vibration records attached for your information.

The amount of Fee ... £ 11 : 10 : 0 { When applied for 29 JUN 1948  
 Travelling Expenses (if any) £ : : { When received 19

Committee's Minute  
 Assigned Deposed for Completion



LLOYD'S REGISTER OF SHIPPING (MADE AND PRINTED IN ENGLAND)