

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 104633

8 JUL 1937

Date of writing Report 25 June 1937 When handed in at Local Office 8 JUL 1937 Port of London
No. in Survey held at Bedford Date, First Survey 29 Dec 36 Last Survey 11 June 1937
Reg. Book. Single on the Twin Screw vessel Triple Quadruple Tons Gross Net

Built at Barrow By whom built Vickers Armstrong, Ltd. Yard No. 723 When built 1937
Owners P. O. Ltd. Navigation Co. Ltd. Port belonging to
Oil Engines made at Bedford By whom made W. H. Allen, Ltd. Contract No. K/60404 When made 1937
Generators made at Bedford By whom made W. H. Allen, Ltd. Contract No. E/60405 When made 1937
No. of Sets 1 Engine Brake Horse Power 165 Nom. Horse Power as per Rule 47 Total Capacity of Generators 110 Kilowatts.

OIL ENGINES, &c.—Type of Engines Heavy Oil Airless Injection 2 or 4 stroke cycle 4 Single or double acting single
Maximum pressure in cylinders 650 Diameter of cylinders 200 Z Length of stroke 275 Z No. of cylinders 6 No. of cranks 6
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 214 Z Is there a bearing between each crank no
Revolutions per minute 600 Flywheel dia. 1130 Z Weight 1400 lb Means of ignition Compression Kind of fuel used Heavy Oil
Crank Shaft, dia. of journals as per Rule 111 Z as fitted 130 Z Crank pin dia. 130 Z Crank Webs Mid. length breadth 182 Z Thickness parallel to axis shrunk
Mid. length thickness 50 Z Thickness around eyehole shrunk
Flywheel Shaft, diameter as per Rule Crank shaft Intermediate Shafts, diameter as per Rule shrunk Thickness of cylinder liners 14 Z
Is a governor or other arrangement fitted to prevent racing of the engine when declutched no 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. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel no
Lubricating Oil Pumps, No. and size one 9 galls per minute

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule no
Can the internal surfaces of the receivers be examined no What means are provided for cleaning their inner surfaces no
Is there a drain arrangement fitted at the lowest part of each receiver no
High Pressure Air Receivers, No. no Cubic capacity of each no Internal diameter no thickness no
Seamless, lap welded or riveted longitudinal joint no Material no Range of tensile strength no Working pressure by Rules no
Starting Air Receivers, No. 2 Total cubic capacity 12 cu ft Internal diameter 13 7/8 thickness 5/16
Seamless, lap welded or riveted longitudinal joint D.R. LAP. Material Steel Range of tensile strength 26/20 tons Working pressure by Rules 360 lb
Actual 300 lb

ELECTRIC GENERATORS:—Type Open with Canopy.
Pressure of supply 220 volts. Full Load Current 500 Amperes. Direct or Alternating Current Direct
If alternating current system, state the periodicity no Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on and off no
Generators, are they compounded as per rule no is an adjustable regulating resistance fitted in series with each shunt field no
Are all terminals accessible, clearly marked, and furnished with sockets no
Are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched no Are the lubricating arrangements of the generators as per Rule no
If the generators are under 100 kw. full load rating, have the makers supplied certificates of test no and do the results comply with the requirements no
If the generators are 100 kw. or over have they been built and tested under survey no

PLANS. Are approved plans forwarded herewith for Shafting 25.11.31 Receivers 23.7.34 Separate Tanks 19.3.37.
(If not, state date of approval)

SPARE GEAR Complete set of valves and springs; 3 fuel injection nozzles; 1 set of rings for one piston; 1 set studs & nuts for one cylinder cover; 2 bottom end bolts; 2 main bearing bolts; one fuel pump; 1 gudgeon pin etc.

The foregoing is a correct description,

W. H. ALLEN, SONS & CO., LTD.,

Manufacturer. H. H. Clarke.



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Dates of Survey while building { During progress of work in shops - - } 1936 Dec 29 1937 March 12. 16. 25. April 6. 8. 12. 20. 28. May 10. 11. June 10. 11. Total No. of visits 12 (In shops)

Dates of Examination of principal parts—Cylinders 16. 3. 37 Covers 20. 4. 37 Pistons 28. 4. 37 Piston rods 12. 4. 37

Connecting rods 12. 4. 37 Crank and Flywheel shaft 29. 12. 36 Intermediate shaft -

Crank and Flywheel shafts, Material Steel Identification Mark 44705 7205 HAB 9. 11. 36 HAG 4. 2. 37

Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case? No If so, state name of vessel M.V. ORION.

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

This emergency electric generating set has been constructed under Special License in accordance with the requirements of the Rules & approved plans. The materials have been made at Works approved by the Committee & the workmanship is good. Full & 10% overload trials were carried out with satisfactory results.

The Generator has now been despatched to Barrow for fitting on board.

The amount of Fee ... £ 6-6-0 | When applied for, - 8 JUL 1937
 Travelling Expenses (if any) £ 2-2-6 | When received, 7.9.1937

A. J. Garnett
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 18 MAR 1938

Assigned See Buo 2687

1m.2.36.—Transfer. (The Surveyors are requested not to write on or below the space for Committee Minute.)

