

Std. No. 30561

pt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Serial No. 95914

Received at London Office 11 JAN 1931 30 JAN 1931

Date of writing Report 11 JAN 1931 When handed in at Local Office 11 JAN 1931 Port of London  
No. in Survey held at Reg. Book. Date, First Survey 16<sup>th</sup> June Last Survey 27<sup>th</sup> Dec 1930  
Number of Visits

Single on the Twin Triple Quadruple Screw vessel "BRITISH SCIENCE"  
Built at Newcastle-on-Tyne By whom built Palmer Ship. & Iron Co. Ltd. Yard No. 1003 When built  
Owners British Tankers Co. Ltd. Port belonging to  
Oil Engines made at Bedford By whom made Messrs. W. H. Allen & Co. Ltd. Contract No. N/23162/1/15 When made 1930  
Generators made at do By whom made do Contract No. E/23163/1/2 When made 1930  
No. of Sets 2 Engine Brake Horse Power 200<sup>1/2</sup> Nom. Horse Power as per Rule 64 Total Capacity of Generators 130 Kilowatts.

**IL ENGINES, &c.**—Type of Engines Allen Airless Injection 2 or 4 stroke cycle 4 Single or double acting S.A.  
Maximum pressure in cylinders 550 lb/sq. in. Diameter of cylinders 325<sup>7/8</sup> Length of stroke 370<sup>7/8</sup> No. of cylinders 2 No. of cranks 2  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 450<sup>7/8</sup> Is there a bearing between each crank Yes  
Revolutions per minute 300 Flywheel dia. 1600<sup>7/8</sup> Weight 3.15 Tons Means of ignition Compression Kind of fuel used Diesel  
Crank Shaft, dia. of journals as per Rule 179<sup>7/8</sup> as fitted 190<sup>7/8</sup> Crank pin dia. 190<sup>7/8</sup> Crank Webs Mid. length breadth 280<sup>7/8</sup> Mid. length thickness 100<sup>7/8</sup> Thickness parallel to axis shrunk SOLID FORGED Thickness around eye-hole  
Flywheel Shaft, diameter as per Rule CRANKSHAFT Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 23.5<sup>7/8</sup>  
Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Mechanical forced.  
Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material  
Cooling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
Lubricating Oil Pumps, No. and size One per Engine  
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 Open Type (Hermin Proof.) Direct.  
Pressure of supply 110 volts. Load 590 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 Yes  
Generators, do they comply with the requirements regarding rating Yes are they compound wound Yes  
are they over compounded 5 per cent. level compounding if not compound wound state distance between each generator  
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

**PLANS.** Are approved plans forwarded herewith for Shafting 26<sup>th</sup> Mar. 1929 Receivers Separate Tanks  
**SPARE GEAR** As per List attached. Sg. No. 4/76737. 1 set list 2.

The foregoing is a correct description,  
H. ALLEN, SURVEYOR GENERAL, LONDON.

Manufacturer.



W11-0034

Dates of Survey while building { During progress of work in shops - - June 16. 19. 27  
 { During erection on board vessel - - Oct. 10. 15. 28. 31. Nov 7. 18. Dec. 3. 16. 23. 1930  
 Total No. of visits 12 partial = 5 full

Dates of Examination of principal parts—Cylinders Oct 10. 15. Dec 16 Covers Oct 10 Dec 16 Pistons Dec 3. Piston rods ✓

Connecting rods June 16. 19. 27 Crank and Flywheel shaft Oct. 28. Intermediate shaft ✓

Crank and Flywheel shaft, Material Steel Identification Mark SEE BELOW. Intermediate shaft, 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.)

Crank Shaft Identification marks:-  
 Eng. A. TEST  
 165  
 J.P.  
 LLOYDS  
 8793  
 23-7-30  
 A L R C  
 28-10-30

Eng. B. TEST  
 229  
 L.Y.  
 LLOYDS  
 29-8-30  
 A L R C  
 28-10-30

This Machinery has been constructed under Special Survey in accordance with approved plans and Rule Requirements. The Workmanship and Materials, so far as can be seen, are good and satisfactory Bench trials have been carried out. The two sets, which are numbered 23162/A/B, have been despatched to Newcastle where they are to be installed on board the vessel and, in my opinion, will be eligible for inclusion in the Classification and record of L.M.C. when this has been done. This machinery has been satisfactorily fitted on board & tested under full working conditions.

1m. 7.28—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ 6-8-0 When applied for 11 JAN 1931

Travelling Expenses (if any) £ 4-7-9 When received 7.2.1931

*Handwritten signatures: H. Harbottle, A. Marshall Palmer*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 10 FEB 1931

Assigned

See Note 26. 86769



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