

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 99207

Received at London Office

Writing Report 12 JAN 1928 When handed in at Local Office 12 JAN 1928 Port of London
in Survey held at Bedford Date, First Survey 14 JUNE 1927 Last Survey 29 DEC 1927
Book. Number of Visits

on the Single Screw vessel "GREYSTOKE CASTLE" Tons { Gross Net

at Birkenhead By whom built Messrs. Lammell Laird & Co. Yard No. 928 When built
Messrs. James Chambers & Co. Port belonging to Liverpool

Engines made at Bedford By whom made Messrs. W.H. Allen Sons & Co. Contract No. 6740/A/B When made 1927
Generators made at Sunderland By whom made Messrs. The Sunderland Forge & Engineering Co. Ltd. Contract No. C332/3 When made 1927

of Sets 4 Engine Brake Horse Power 497 Nom. Horse Power as per Rule 142 Total Capacity of Generators 330 Kilowatts.

ENGINES, &c. Type of Engines Burmeister - Main (Diesel) 2 or 4 stroke cycle 4 Single or double acting S.A.
Minimum pressure in cylinders 570 lb Diameter of cylinders 12 1/2" 325 mm Length of stroke 13 1/2" 350 mm No. of cylinders 2-3 do No. of cranks 2-3 do

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 380 mm Is there a bearing between each crank Yes
Revolutions per minute 300 Flywheel dia. 1600 mm Weight 3.9 tons Means of ignition Compression Kind of fuel used Diesel
Crank Shaft, dia. of journals as per Rule 169 mm as fitted 190 mm Crank pin dia. 190 mm Crank Webs Mid. length breadth 280 mm Mid. length thickness 100 mm Thickness parallel to axis SOLID FORGED Thickness normal to axis

Crank Shaft, diameter as per Rule 169 mm Intermediate Shafts, diameter as fitted 190 mm Thickness of cylinder liners 23.5 mm
Is there 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. 1 Chain Driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Lubricating Oil Pumps, No. and size 2 Engine Driven

Air Compressors, No. 1 to each Engine No. of stages 3 Diameters 180 x 158 x 36 mm Stroke 174 mm 2 cyl. Driven by Crank on Engine
Suctioning Air Pumps, No. 1 Diameter 180 x 158 x 36 mm Stroke 210 mm 3 cyl. Driven by Crank on Engine

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Fusible plug
Are the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Ends portable
Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. 1 to each Engine Cubic capacity of each 35 litres Internal diameter 7 1/4" thickness 3/8"
Seamless Material Steel Range of tensile strength 29/33 Working pressure by Rules 1104
Starting Air Receivers, No. 1 to each Engine Total cubic capacity 150 litres Internal diameter 12" thickness 1/2"
Seamless Material Steel Range of tensile strength 29/33 Working pressure by Rules 1000

ELECTRIC GENERATORS:—Type Made by Sunderland Forge & Engineering Co. Ltd.
Pressure of supply 220 volts Load 455/3 Amps. Direct or Alternating Current Yes
Is an alternating current system, state frequency of periods per second Yes

Are 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 compound

Are there any 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
Are approved plans forwarded herewith for Shafting, Receivers, Separate Tanks Yes
(If not, state date of approval) 14-10-27

PREPARE GEAR
As per attached list K/73789

The foregoing is a correct description,
W.H. ALLEN SONS & COMPANY LIMITED Manufacturer.
Aurica



Dates of Survey while building { During progress of work in shops - - June 14. July .6. 27. Aug. 26. Sep. 15. 10. 27. Oct. 3. 8. 11. 15. 20. 24. 31. Nov. 5. 17. Dec. 5. 8. 15. 20. 23. 29.
 { During erection on board vessel - - - }
 Total No. of visits 22 partial = 9 full.

Dates of Examination of principal parts - Cylinders _____ Covers _____ Pistons _____ Piston rods _____

Connecting rods _____ Crank and Flywheel shaft _____ Intermediate shaft _____

Crank and Flywheel shaft, Material Inf. Steel Identification Mark See below 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.) Crank Shaft Identification Mark

Eng. N° 67401/A.
 6880
 6939
 7167 E.
 T.H.
 1011 T.H.
 LLOYDS
 1790
 29-7-27
 T.H.
 6-10-27
 LR

2 Cylinder Engines

Eng. N° 67401/B.
 6880
 6987
 7167 F
 T.H.
 1011
 LLOYDS N° 1791
 29-7-27
 T.H.
 6-10-27
 LR

Eng. N° 67407/A.
 6880
 6962
 7223 F.
 T.H.
 1005
 LLOYDS
 1764
 22-7-27
 T.H.
 20-9-27
 LR

3 Cylinder Engines

Eng. N° 67407/B.
 6880
 7223
 T.H.
 1004
 LLOYDS
 1763
 22-7-27
 T.H.
 6-10-27
 LR

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 under survey.

The four sets i.e. two 2 Cylinder sets numbered 67401/A/B and two 3 Cylinder sets numbered 67407/A/B have been despatched to Birkenhead where they are to be installed on board and in my opinion, will be eligible for inclusion in the classification and record of +L.M.C. of the vessel.

This machinery has been installed under special survey and tested under working conditions to our satisfaction.

W.S. Shields & J. Milton

Im. 720 - Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ 14 : 4 :
 Travelling Expenses (if any) £ 8 : 11 : 7
 When applied for, 12 JAN 1928
 When received, 9/3/28

Arthur Palmer
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____
 Assigned _____

