

W1133-0188

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 54531

3 SEP. 1934

16 MAY 1934

Received at London Office

Date of writing Report 9th May 1934 When handed in at Local Office 14th May 1934 Port of GLASGOW

No. in Survey held at Glasgow Date, First Survey 10th May 1933 Last Survey 4th May 1934

Reg. Book. Glasgow Number of Visits 30
Type of vessel Single Screw vessel "WAIWERA" Tons { Gross Net

Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 922 When built 1934

Owners Messrs. Shaw, Savill & Albion Co. Ltd. Port belonging to

Engines made at Glasgow By whom made Harland & Wolff Ltd. Contract No. 922 When made 1934

Motors made at Belfast By whom made Do. Contract No. 922 When made 1934

Sets 4 Engine Brake Horse Power 433 each Nom. Horse Power as per Rule 495 Total Capacity of Generators 1200 Kilowatts.

ENGINES, &c.—Type of Engines Heavy oil, trunk type: airless injection or 4 stroke cycle 4 Single or double acting Single

Working pressure in cylinders 500 lbs/in² Diameter of cylinders 330 mms. Length of stroke 580 mms. No. of cylinders 6 No. of cranks 6

Bearings, adjacent to the Crank, measured from inner edge to inner edge 400 mms. Is there a bearing between each crank Yes

Revolutions per minute 270 Flywheel dia. 1900 mms. Weight 4.9 tons Means of ignition Compression Kind of fuel used Diesel

Shaft, dia. of journals as per Rule 190 mms. Crank pin dia. 220 mms. Crank Webs Mid. length breadth 288 mms. Thickness parallel to axis Solid

as fitted 280 mms. Mid. length thickness 115 mms. Thickness around eye-hole Forgings

Steel Shaft, diameter as per Rule Fitted on crank shaft Intermediate Shafts, diameter as per Rule Yes Thickness of cylinder liners 24 to 20 mms

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 Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

Eng. Water Pumps, No. Ship's system Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size 1 (each) @ 6 1/2 tons/hour

Compressors, No. None No. of stages Yes Diameters Yes Stroke Yes Driven by Yes

Eng. Air Pumps, No. None Diameter Yes Stroke Yes Driven by Yes

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Are the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces

Are there a drain arrangement fitted at the lowest part of each receiver

Pressure Air Receivers, No. Main Engines Cubic capacity Report on Internal diameter thickness

Are they less, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Eng. Air Receivers, No. Belfast Report Total cubic capacity Internal diameter thickness

Are they less, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

ELECTRIC GENERATORS:—Type Harland & Wolff: Open Type

Working pressure of supply 220 volts. Load 1350 Amperes. Direct or Alternating Current Direct

Are they Alternating current system, state frequency of periods per second Yes

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes

Do the generators, do they comply with the requirements regarding rating Yes are they compound wound Yes

Are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator

Are there 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

Are approved plans forwarded herewith for Shafting Yes Receivers Del. Rpt. Separate Tanks Del. Rpt.

SHAFTING GEAR As per attached list.

The foregoing is a correct description,
For HARLAND AND WOLFF, LIMITED.

Wm. J. Wright

Manufacturer.

Finnlestone Secretary



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Lloyd's Register
Foundation

Dates of Survey while building
 During progress of work in shops - 1933 Nov: 10. 20. 22. 24 Dec: 5. 7. 11. 20. 21. 22. 25. 27. 28 (1934) Jan: 8. 9. 11. 12. 17
 During erection on board vessel - 23. 24. 26. 30 Feb: 6. 7. 9. 22 Mar: 9. 18. 27 May: 4
 Total No. of visits 30

Dates of Examination of principal parts—Cylinders 22-2-34 Covers 12-1-34 Pistons 22-2-34 Piston rods None

Connecting rods 17-1-34 Crank and Flywheel shaft 28-12-33, 30-1-34 Intermediate shaft 11-1-34, 9-2-34 ✓

Crank and Flywheel shaft, Material Steel Identification Mark 4740, 4748, 308 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.) These four auxiliary engines have been built under special survey in accordance with the Society's Rules & the approved plans. The materials & workmanship are good. Together with the generators they have been examined under full power on the Works test bed & found satisfactory. The engines & generators have been forwarded to Belfast to be fitted in the vessel.

J 14/5/34

These auxiliary engines have been efficiently installed on the vessel in the wings of the main motor room. They have been tried out under working conditions with satisfactory results and the vessel is eligible, in my opinion, for classification in the Society's Register Book.

R Lee Amess
 30. 8. 34. Belfast.

Im. 7. 26 - Transfer. (The Surveys are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ 49 : 10/-
 Travelling Expenses (if any) £ : :
 When applied for, 15 MAY 1934
 When received, 22nd June 1934 see Secs notice C.4.

R Boyle
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 MAY 1934
 Assigned Deferred.

FRI 14 SEP 1934

