

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 107086

Received at London Office 13 MAR 1939

Date of writing Report 13 MAR 1939 When handed in at Local Office 13 MAR 1939 Port of London  
No. in Survey held at Bedford Date, First Survey 2<sup>nd</sup> Nov 1938 Last Survey 16<sup>th</sup> Dec 1938  
Reg. Book. Number of Visits 9/10

on the <sup>Single</sup> Twin <sup>Triple</sup> Screw vessel Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_  
Quadruple

Built at Hong Kong By whom built Hongkong Whampoa Drydock Co. Ltd. No. 804 When built \_\_\_\_\_

Owners Messrs Matheson & Co. Ltd. Port belonging to \_\_\_\_\_

Oil Engines made at Bedford By whom made W.H. Allen Son & Co. Ltd. Contract No. K/75852 When made 1938

Generators made at do. By whom made do. Contract No. \_\_\_\_\_ When made 1938

No. of Sets 3. Engine Brake Horse Power 120 Nom. Horse Power as per Rule 2389 Total Capacity of Generators 80 Kilowatts.

OIL ENGINES, &c.—Type of Engines Heavy Oil 2 or 4 stroke cycle 4 Single or double acting Single  
Maximum pressure in cylinders 700 lbs/sq. in. Diameter of cylinders 230 mm Length of stroke 300 mm No. of cylinders 3 No. of cranks 3  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 282 mm Is there a bearing between each crank Yes

Revolutions per minute 540 Flywheel dia. 1200 mm Weight 2800 lbs Means of ignition Compression Kind of fuel used Diesel oil  
Crank Shaft, dia. of journals as per Rule \_\_\_\_\_ as fitted 140 mm Crank pin dia. 150 mm Crank Webs Mid. length breadth 190 mm Thickness parallel to axis \_\_\_\_\_  
Mid. length thickness 70 mm Thickness around eyehole \_\_\_\_\_

Flywheel Shaft, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Intermediate Shafts, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Thickness of cylinder liners 17 mm

Is a 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 \_\_\_\_\_

Cooling Water Pumps, No. one to each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel \_\_\_\_\_

Lubricating Oil Pumps, No. and size \_\_\_\_\_

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 (each) Direct or Alternating Current Direct

Pressure of supply 220 volts. Full Load Current 363 Amperes. Direct or Alternating Current Direct

If alternating current system, state the periodicity \_\_\_\_\_ Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on and off Yes

Generators, are they compounded as per rule Yes 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 the lubricating arrangements of the generators as per Rule 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 Yes and do the results comply with the requirements Yes

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

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

SPARE GEAR As below:—

- 3 Fuel Injectors - 6 Fuel nozzles
- 3 Fuel Injector Springs.
- 1 Inlet Valve complete assembly.
- 6 Exhaust do do do.
- 3 Exhaust Valves only.
- 9 Exhaust Valve springs (inner & outer)
- 1 Starting Valve assembly. - 1 starting valve spring.
- 1 Fuel Pump - 2 Fuel filter cartridges.
- 2 Big end Bolts & nuts.
- 2 Main Bearing studs & nuts.
- 3 sets of piston rings for 1 piston.
- 1 Judson pin & bush.
- 1 set of studs & nuts for cyl. cover.
- 1 cyl. head relief valve
- 6. cyl. liner rubber joint rings.
- 1 Big end bearing bush.
- 1 pair of main bearings
- 1 tub oil filter cartridge
- 1 governor spring
- 1 Fuel injection pipe
- 3 sets of generator brushes
- 3 sets of generator brush holders
- 1 Spare Armature.

The foregoing is a correct description,

W.H. ALLEN, SONS & Co., Ltd., Manufacturer. H.A. Clarke.



W266-0067

1938. <sup>See 13</sup> Nov. 2, 9, 11, 15, 18, 22, 28 Dec 13, 16.  
During progress of work in shops - -  
During erection on board vessel - - -  
Total No. of visits 9. 10 (In Shops)

Dates of Examination of principal parts—Cylinders 18. 11. 38. Covers 18. 11. 38 Pistons 22. 11. 38 Piston rods ✓

Connecting rods 9. 11. 38 Crank and Flywheel shaft 2. 11. 38, 13. 9. 38, 28. 4. 38 Intermediate shaft ✓

Crank and Flywheel shafts, Material Steel Identification Mark LLOYDS 9180 LLOYDS 8983 LLOYDS 8742  
GRC 23. 9. 38 MAB 23. 5. 38 MAB 23. 3. 38  
HA9 2. 11. 38 AWC 13. 9. 38 HA9 28. 4. 38

Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines have been constructed under Special Survey in accordance with the requirements of the Rules and approved plans; the steel was made at Works approved by the Committee; the workmanship is good and on completion the generators were tested upon the bench under full and overload conditions with satisfactory results.

The generators have been despatched to Hong Kong for installing on board the vessel.

For HA Jamett  
J. R. Milton  
Surveyor to Lloyd's Register of Shipping.

The amount of Fee ... £ 18 : 18 0  
Travelling Expenses (if any) £ 1 : 14 0  
When applied for, 13. 11. 38  
When received, 15. 12. 38  
RMEK

FRI. 1 SEP 1939

Committee's Minute  
Assigned see minute on  
Hkg S.S. Rpt. 891

