

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 111873

27 APR 1944

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Received at London Office 27 APR 1944 16 NOV 1944

Date of writing Report

When handed in at Local Office

Port of LONDON

No. in Survey held at

Date, First Survey 29 Dec 1943 Last Survey 14 APRIL 1944

Reg. Book

Number of Visits 19

on the **Single** Screw vessel
Twin
Triple
Quadruple

EMPIRE RAWLINSON

Tons { Gross
Net

Built at **Glasgow**

By whom built **J. G. Kincaid & Co Ltd**

Yard No. **K/155L** When built **1944**

Owners **M. O. W. T.**

Port belonging to

Oil Engines made at **Bedford**

By whom made **W. H. Allen Sons & Co Ltd**

Contract No. **K/44686** When made **1944**

Generators made at **Bedford**

By whom made **W. H. Allen Sons & Co Ltd**

Contract No. **E/44687** When made **1944**

No. of Sets **3** Engine Brake Horse Power **311** Nom. Horse Power as per Rule Total Capacity of Generators **210** Kilowatts.

IL ENGINES, &c.—Type of Engines **Heavy Fuel** 2 or 4 stroke cycle **4** Single or double acting **Single**

Maximum pressure in cylinders **750 lbs** Diameter of cylinders **240 mm** Length of stroke **300 mm** No. of cylinders **7** No. of cranks **7**

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 **600** Flywheel dia. **1200 mm** Weight **3500 lb** Means of ignition **Perpump** Kind of fuel used **Diesel Fuel**

Crank Shaft, dia. of journals as per Rule **140 mm** as fitted Crank pin dia. **150 mm** Crank Webs Mid. length breadth **216 mm** Thickness parallel to axis **70 mm** Mid. length thickness **70 mm** Thickness around eyehole

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as fitted Thickness of cylinder liners **19 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. **on 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

IR 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. **one** Total cubic capacity **5 cu ft** Internal diameter **18"** thickness **5/16"**

Seamless, lap welded or riveted longitudinal joint **Seamless** Material **Steel** Range of tensile strength **26/30** Working pressure by Rules **300 lbs sq in**

ELECTRIC GENERATORS:—Type

Pressure of supply **220** volts. Full Load Current 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

Generators, are they compounded as per rule is an adjustable regulating resistance fitted in series with each shunt field

Are all terminals accessible, clearly marked, and furnished with sockets

are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Are the lubricating arrangements of the generators as per Rule

If the generators are under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements

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

PLANS. Are approved plans forwarded herewith for Shafting **23. 3. 39** Receivers Separate Tanks

SPARE GEAR One complete set of tools for one cylinder, 4 Nozzles, one set of piston rings, one piston, one set of cylinder head studs and nuts for one cylinder, one big end bearing with bolts, one gudgeon pin, one top end bearing, two bolts and nuts for main bearing, one fuel pump, one fuel injector pipe, 10 spare lites for fresh water and lubricating oil cooler, two brush holders and one set of brushes for one machine

These engines have been efficiently installed in the vessel & tested under full load with satisfactory results. Please see machinery report for recommendations.

The foregoing is a correct description,

W. H. ALLEN, SONS & CO., LTD., Manufacturer.
R. K. Clarke, 19.4.44.



Dates of Survey while building
 During progress of work in shops - - 1943: Dec 29
 During erection on board vessel - - - 1944: Jan 4, 7, 11, 15, 14, 21, 25, 28 Feb 1, 14, 18, 22, 25 Mar 3-7 Apr 4-7, 14
 Total No. of visits 19 (shops)

Dates of Examination of principal parts—Cylinders 29-12-43, 7-1-44, 4-1-44, 21-1-44
 Covers 18-1-44, 14-2-44, 25-1-44, 1-2-44, 18-2-44
 Pistons 18-1-44, 1-2-44
 Piston rods

Connecting rods A 21-1-44, B 14-2-44, C 21-1-44
 Crank and Flywheel shaft 21-1-44, 25-1-44, 14-2-44
 Intermediate shaft

Crank and Flywheel shafts, Material Identification Marks
 207 SET A 3152 8-10-43 J.B. 21-1-44
 132 SET B 3077 LLOYDS T.T. 14-2-44
 SET C 127 LLOYDS 3067 T.T. 25-1-44

Intermediate shafts, Material Identification Marks
 21-1-44, 14-2-44, 25-1-44

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 generator engine was constructed under special survey in accordance with the requirements of the Rules and approved plans; The workmanship is good. The steel was made at Works approved by the Committee, and on completion the set was tested upon the bench under full and overload condition and found satisfactory.

The generator sets have been despatched to Glasgow for fitting on the board vessel. J 155.

Marks on Air Receiver
 S 11952
 LLOYDS TEST
 600 lb
 W.P. 300 lb
 J.N.B. 12-3-43.

The amount of Fee ... £ 31 : 10 : 27 APR 1944
 Travelling Expenses (if any) £ 7 : 8 : 9
 When applied for, When received, 19...

R.W. Bomber.
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned
 GLASGOW 14 NOV 1944



Im. 236 - Transfer.
 (The Survivors are requested not to write on or below the space for Committee Minute.)