

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 22634

Received at London Office

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Date of writing Report 21.12.37 19 When handed in at Local Office 19

Port of **HAMBURG**No. in Survey held at **Kiel**  
Reg. Book.

Date, First Survey 25.3.37

Last Survey 8.1.37 19

Number of Visits 19

on the **China**  
Screw vesselTons { Gross 10781  
Net 6545Built at **Kiel**By whom built **F. Krupp Germaniawerft A.G.** Yard No. 569 When built 1938Owners **Balboa Transport Corporation**Port belonging to **Panama P.R.**Oil Engines made at **Kiel**By whom made **F. Krupp Germaniawerft A.G.** Contract No. 5980-83 When made 1938Generators made at **Nürnberg**By whom made **Siemens-Schuckertwerke A.G.** Contract No. 1002222/3 When made 1937No. of Sets 2 Engine Brake Horse Power ~~205~~ Nom. Horse Power as per Rule 118 Total Capacity of Generators 270 Kilowatts.OIL ENGINES, &c. Type of Engines **Heavy Oil, Maker's type 5 II** 2 or 4 stroke cycle 4 Single or double acting **single**Maximum pressure in cylinders **48 kg/cm<sup>2</sup>** Diameter of cylinders **298 mm** Length of stroke **440 mm** No. of cylinders 3 No. of cranks 3M.I.P. **7 kg/cm<sup>2</sup>** Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **330 mm** Is there a bearing between each crank **yes**Revolutions per minute **400** Flywheel dia. **1650 mm** Weight **4650 kg.** Means of ignition **Diesel syst.** Kind of fuel used **Sea oil**Crank Shaft, dia. of journals as per Rule **167.5 mm - 5% = 159 mm** Crank pin dia. **175 mm** Mid. length breadth **270 mm** Thickness parallel to axis **solid**as fitted **175 mm** Crank Webs Mid. length thickness **85 mm** Thickness around eyehole **forged**Flywheel Shaft, diameter as per Rule **159 mm** Intermediate Shafts, diameter as per Rule **✓** Thickness of cylinder liners **26.5 mm tapered to 23.5**as fitted **195 mm** as fitted **✓**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 **manifolds water cooled**Cooling Water Pumps, No. **1**  $\phi$  **105 mm**, **5 = 86 mm** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **yes**Lubricating Oil Pumps, No. and size **1 cog wheel of 3.9 m<sup>3</sup>/h**Air Compressors, No. **none** No. of stages **✓** Diameters **✓** Stroke **✓** Driven by **✓**Scavenging Air Pumps, No. **none** Diameter **✓** Stroke **✓** Driven by **✓**AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule **yes**Can the internal surfaces of the receivers be examined **yes** What means are provided for cleaning their inner surfaces **cover**Is there a drain arrangement fitted at the lowest part of each receiver **yes**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. **1** Total cubic capacity **50 Litres** Internal diameter **212 mm** thickness **12 mm**Seamless, lap welded or riveted longitudinal joint **seamless** Material **0.4 steel** Range of tensile strength **66.6 kg/mm<sup>2</sup>** Working pressure by Rules **160 kg/cm<sup>2</sup>**ELECTRIC GENERATORS:—Type **Siemens-Schuckertwerke's V&V Form D.C.**Pressure of supply **115** volts. Full Load Current **1175** Amperes. Direct or Alternating Current **D.C.**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 eachshunt 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**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 **yes**PLANS. Are approved plans forwarded herewith for Shafting **11.1.37** Receivers **5, 7.7.37.** Separate Tanks **✓**

(If not, state date of approval)

SPARE GEAR **Supplied as required by Rules**Additional Spare Parts: **1 exhaust valve, 1 piston rings, 1 main bearing, 1 piston compl.**

and a considerable number of small further parts.

The foregoing is a correct description,

FRIED. KRUPP  
GERMANIAWERFT  
Aktiengesellschaft

Manufacturer.



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1937:-  
 Dates of Survey while building { During progress of work in shops - - Mar: 25 Apr: 16, 20 June: 14, 16, July: 2, 9, 13, 16, 20 Aug: 20, 23, 27 Sep: 6, 22  
 { During erection on board vessel - - - Dec: 13, 20 1938 Jan: 3, 8  
 Total No. of visits 19

Dates of Examination of principal parts—Cylinders 16-10-7-37 Covers 14-6-37 Pistons 14-6-37 Piston rods ✓

Connecting rods 18-6-37 Crank and Flywheel shaft 20-8-37 Intermediate shaft ✓

Crank and Flywheel shafts, Material O.H. Steel ✓ Identification Mark LLOYD'S M.B. 13269-13270 23-7-37 ✓

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, etc.)

These auxiliary oil engine electric generating sets were constructed under special survey in accordance with the approved plans and instructions thereto and in compliance with the Society's Rules. The materials used in the construction are of good quality and the workmanship is satisfactory. They are satisfactorily fitted on board and were tested under working conditions with satisfactory results. In my opinion they are eligible to be classed in the Society's Register Book with notation of +LMC-138 as part of the vessel's machinery.

The amount of Fee ... £ : : When applied for, 19  
 Travelling Expenses (if any) £ : : When received, 19

J.A. Whiffener  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 4 FEB 1938  
 Assigned See other T. E. report



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