

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 8656.

Received at London Office

23 JUL 1934

Site of writing Report 19 When handed in at Local Office 19 Port of **KOBE**
 Date, First Survey **9-2-34** Last Survey **2-6-1934**
 Number of Visits **6**
 Survey held at **KOBE**
 on the **Single** Screw vessel **MOTOR VESSEL TOR MARU**
 Tons { Gross **10052**
 Net **9038**
 Built at **KOBE** By whom built **KAWASAKI DOCKYARD CO.** Yard No. **572** When built **1934**
 Owners **IINO SHOJI KABUSHIKI KAISHA** Port belonging to **NAKAMAIZURU**
 Engines made at **KOBE** By whom made **HANSHIN IRON WORKS LTD.** Contract No. When made **1934**
 Generators made at **KOBE** By whom made **KAWASAKI DOCKYARD CO.** Contract No. When made **1934**
 diam. of Sets **1** Engine Brake Horse Power **40** Nom. Horse Power as per Rule **12** Total Capacity of Generators **20** Kilowatts.

L ENGINES, &c.—Type of Engines **SOLID INJECTION** 2 or 4 stroke cycle **2** Single or double acting **SINGLE**
 Maximum pressure in cylinders **63 kg/cm²** Diameter of cylinders **150 mm** Length of stroke **270 mm** No. of cylinders **2** No. of cranks **2**
 Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge **192 mm** Is there a bearing between each crank **YES**
 Revolutions per minute **450** Flywheel dia. **1000 mm** Weight **494 kg** Means of ignition **COMPRESSION** Kind of fuel used **HEAVY OIL**
 Crank Shaft, dia. of journals **100 mm** as per Rule **100 mm** Crank pin dia. **100 mm** Mid. length breadth **140 mm** Thickness parallel to axis **shrunk**
 as fitted **100 mm** Crank Webs **55 mm** Mid. length thickness **55 mm** Thickness around eyehole **shrunk**
 Flywheel Shaft, diameter **110 mm** as per Rule **110 mm** Intermediate Shafts, diameter **as per Rule** Thickness of cylinder liners **15 mm**
 as fitted **110 mm** as fitted **as fitted**
 Is there 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 **WATER COOLED**
 Cooling Water Pumps, No. **1** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **YES**
 Lubricating Oil Pumps, No. and size **1. ROTARY. ROTOR DIA 40 mm. LENGTH 24 mm. CASING DIA 48 mm.**
 Air Compressors, No. **1** No. of stages **2** Diameters **106, 120 mm** Stroke **180 mm** Driven by **OIL ENGINE**
 Sucking Air Pumps, No. **1. ROTARY.** Diameter **CASING 300 mm. ROTOR 225 mm** LENGTH **250 mm** Driven by **CRANK SHAFT**

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule **YES**
 Are the internal surfaces of the receivers be examined **YES** What means are provided for cleaning their inner surfaces **STEAM**
 Is there a drain arrangement fitted at the lowest part of each receiver **YES**
 High Pressure Air Receivers, No. **1** Cubic capacity of each **1** Internal diameter **1** thickness **1**
 Seamless, lap welded or riveted longitudinal joint **1** Material **1** Range of tensile strength **1** Working pressure by Rules **1**
 Sucking Air Receivers, No. **1** Total cubic capacity **95 LITRE** Internal diameter **330** thickness **1**
 Seamless, lap welded or riveted longitudinal joint **LAP JOINT** Material **STEEL** Range of tensile strength **22-32** Working pressure by Rules **35 kg/cm²**

ELECTRIC GENERATORS:—Type **D.C. COMPOUND**
 Voltage of supply **225** volts. Load **89** Amperes. **DIRECT** or Alternating Current **DIRECT**
 Is 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 **1**
 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 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**

ANS. Are approved plans forwarded herewith for Shafting **1** Receivers **1** Separate Tanks **1**
 (If not, state date of approval)

ARE GEAR **1. CYLINDER COVER COMPLETE WITH VALVES.** **1. SET NUTS & BOLTS FOR CYL COVER ETC.**
1. SET PISTON RINGS. **1. FUEL PIPE PUMP TO VALVE.**
1. CRANK PIN BRASSES COMPLETE.
1. GUDGEON PIN BUSH.
2. MAIN BEARING BRASSES COMPLETE.
1. FUEL CAM COMPLETE.
1. SET SUCTION & DELIVERY FUEL PUMP VALVES.
1. SET COOLING WATER PUMP VALVES.
1. SET SPRINGS.

The foregoing is a correct description,

Sei Yamaguchi
 Managing Director

Manufacturer.



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W1341-0024

Dates of Survey while building { During progress of work in shops - - FEB/34 3. 26. 28. MAR/34. 12. During erection on board vessel - - - MAY/34. 16. JUN/34. 2. Total No. of visits 6.

Dates of Examination of principal parts—Cylinders Covers Pistons Piston rods

Connecting rods Crank and Flywheel shaft Intermediate shaft

Crank and Flywheel shaft, Material Identification Mark 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.)

This hand starting emergency generator has been examined under working conditions, and found satisfactory

1m, 7.28—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ ✓ :

When applied for,

19.

Travelling Expenses (if any) £ ✓ :

When received,

19.

A. E. Munro
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 31 JUL 1934

Assigned

See other J.E. Mph.
No. 8656



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23 OCT 1934