

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 9746

16-9-36 Kob.

Received at London Office

9 NOV 1936

per 8 of writing Report 19 When handed in at Local Office 19 Port of **Kobe**  
 in Survey held at **Kobe** Date, First Survey **18th Dec. 1935** Last Survey **11th SEPT 1936**  
 Book. Number of Visits  
 on the **Single** Screw vessel **M.V. AKAGI MARU** Tons { Gross  
 Triple Net  
 Quadruple  
 at **Nagasaki** By whom built **Mitsubishi Jukogyo K.K.** Yard No. **627** When built  
 by **Kyushu Yusen Kaisha** Port belonging to **Tokio**  
 Engines made at **Kobe** By whom made **Mitsubishi Jukogyo K.K. Kobe** Contract No. **588, 590** When made **1936**  
 Generators made at **Nagasaki** By whom made **Mitsubishi Denki Kaisha** Contract No. When made  
 of Sets **3** Engine Brake Horse Power **330** Nom. Horse Power as per Rule **68** Total Capacity of Generators **660** Kilowatts.

ENGINES, &c.—Type of Engines **MRB6 Vertical trunk piston** 2 or 4 stroke cycle **4** Single or double acting **Single**  
 Minimum pressure in cylinders **46 kg/cm<sup>2</sup>** Diameter of cylinders **275 mm** Length of stroke **420 mm** No. of cylinders **6** No. of cranks **6**  
 No. of bearings, adjacent to the Crank, measured from inner edge to inner edge **324 mm** Is there a bearing between each crank **Yes**  
 Revolutions per minute **360** Flywheel dia. **1,600 mm** Weight **3,180 kg** Means of ignition **Compression** Kind of fuel used **Heavy Oil**  
 Crank Shaft, dia. of journals as per Rule **162.5 mm** Crank pin dia. **170 mm** Crank Webs Mid. length breadth **240 mm** Thickness parallel to axis  
 as fitted **170 mm** Mid. length thickness **93 mm** Thickness around eye hole  
 Wheel Shaft, diameter as per Rule **162.5 mm** Intermediate Shafts, diameter as per Rule  
 as fitted **170 mm** Thickness of cylinder liners **26 mm**  
 Governor or other arrangement fitted to prevent racing of the engine when declutched **Yes** Means of lubrication **Forced lubrication**  
 Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water cooled or lagged with non-conducting material **Water cooled & lagged**  
 Driving 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 single acting 80 mm x 45 mm driven by engine**  
 Compressors, No. **2** No. of stages **3** Diameters **80, 310/360, 80/360 mm** Stroke **180 mm** Driven by **2 of these engines drive air compressors**  
 Sucking Air Pumps, No. Diameter Stroke Driven by

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 **Man hole**  
 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  
 unless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules  
 Working Air Receivers, No. **1** Total cubic capacity **400 litres** Internal diameter **522 mm** thickness **1/2"**  
 unless, lap welded or riveted longitudinal joint **D.R.D.B.** Material **Steel** Range of tensile strength **44-50 kg/cm<sup>2</sup>** Working pressure by Rules **30 kg/cm<sup>2</sup>**

ELECTRIC GENERATORS:—Type **D.C. Compound**  
 Pressure of supply **225** volts. Load **970** Amperes. Direct or Alternating Current **D.C.**  
 Alternating current system, state frequency of periods per second  
 Is the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off **Yes**  
 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  
 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**  
 Are approved plans forwarded herewith for Shafting **2/10/35** Receivers **5/12/35** Separate Tanks

SHAFTING GEAR  
 See separate list

The foregoing is a correct description,

*[Signature]*

Manufacturer.



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Dates of Survey while building { During progress of work in shops - 1935 Dec. 18, 1936 Jan. 13, Feb. 5, 12, 18, 25, 26, 29, March. 3, 4, 10, 13, 14, 18, 19, 24, 26, 28, 30, April 4, 7, 8, 14, 15, 16, 18, 20, 22, 23, 25, 28, 30, May 2, 4, 5, 8, 9, 11, 12, 13, 14, 16, 18, 19, 22, 23, 25, 27, 28, 29, 30, June 1, 2 }  
 { During erection on board vessel - - - }  
 Total No. of visits

Dates of Examination of principal parts—Cylinders 24/3/36 Covers 14/4/36 Pistons 22/4/36 Piston rods ✓

Connecting rods 22/4/36 Crank and Flywheel shaft 30/3/36, 7/4/36, 24/4/36 Intermediate shaft ✓

Crank and Flywheel shafts, Material Forged Mild Steel Identification Mark No. 5060

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.)

These engines have been constucted under special survey in accordance with the Rules and approved plans. The materials and workmanship are good. Stamped as follows.

Mach. No. 588	Mach. No. 589	Mach. No. 590
LLOYD'S	LLOYD'S	LLOYD'S
NO. 104 R	NO. 105 R	NO. 106 R
Y.H. 25-5-36	Y.H. 27-5-36	Y.H. 29-5-36

This machinery has been effeciently installed in board tested under full load overload & parallel running conditions with satisfactory results after the completion of sea trials all machines found up & running & found in good order. This machinery is eligible in our opinion to have the record of +L.M.C. 9.36 in the Register Book

The amount of Fee ... £ 825

Travelling Expenses (if any) £ 100  
 per 7. 2. 7. 13. 19/9/36

When applied for,

19

When received,

27.11.19.36 27/11

J. Hamada H. Buchanan  
 asst. Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 18 NOV 1936

Assigned

See Nav. J.E 2176



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