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June 1, 1936

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 9746

Received at London Office -9 NOV 1936

16-9-36 Kob.

of writing Report 19 When handed in at Local Office 19 Port of **KOBE**

in Survey held at Book. Date, First Survey **27th JAN 35** Last Survey **11 SEP 36** Number of Visits

on the **Single** Screw vessel **M.V. AKAGI MARU** Tons **Gross** **Net**

at **Nagasaki** By whom built **Mitsubishi Jukogyo K.K.** Yard No. **627** When built **1936-9**
by **NIPPON YUSEN KAISHA** Port belonging to **TOKIO**

Engines made at **Kobe** By whom made **Mitsubishi Jukogyo K.K. Kobe** Contract No. **598** When made **1936**

Generators made at **Nagasaki** By whom made **Mitsubishi Jukogyo** Contract No. When made **1936**

of Sets **1** Engine Brake Horse Power **45** Nom. Horse Power as per Rule **10** Total Capacity of Generators **30** Kilowatts.

ENGINES, &c.—Type of Engines **MRW3 Vertical trunk piston** 2 or 4 stroke cycle **4** Single or double acting **Single**

Minimum pressure in cylinders **47 kg/cm²** Diameter of cylinders **150 mm** Length of stroke **230 mm** No. of cylinders **3** No. of cranks **3**

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge **175 mm** Is there a bearing between each crank **Yes**

Revolutions per minute **650** Flywheel dia. **840 mm** Weight **494 kg** Means of ignition **Airless** Kind of fuel used **Heavy Oil**

Crank Shaft, dia. of journals as per Rule **85 mm** Crank pin dia. **92 mm** Crank Webs Mid. length breadth **136 mm** Thickness parallel to axis
as fitted **92 mm** Mid. length thickness **48 mm** Thickness around eyehole

Wheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners **14 mm**
as fitted

Is there a 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 **Yes**

Number of Cooling Water Pumps, No. **1** Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Number of Lubricating Oil Pumps, No. and size **1, gear type**

Number of Compressors, No. **None** No. of stages **-** Diameters Stroke Driven by

Number of Sucking Air Pumps, No. Diameter Stroke Driven by

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Are 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

Number of High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

Material **Seamless** Range of tensile strength **44-55 kg/cm²** Working pressure by Rules **30 kg/cm²**

Number of Working Air Receivers, No. **1** Total cubic capacity **35 litres** Internal diameter **190 mm** thickness **7.5 mm**

Material **Steel** Range of tensile strength **44-55 kg/cm²** Working pressure by Rules **30 kg/cm²**

ELECTRIC GENERATORS:—Type **D.C. COMPOUND**

Voltage of supply **volts** Load **Amperes** Direct or Alternating Current **DIRECT**

Is there an alternating current system, state frequency of periods per second

Has 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 are they compound wound **Yes**

Do they over compounded 5 per cent. if not compound wound state distance between each generator

Is there an adjustable regulating resistance fitted in series with each shunt field 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 Are the lubricating arrangements of the generators as per Rule **Yes**

APPROVED PLANS. Are approved plans forwarded herewith for Shafting **12/11/35** Receivers **12/11/35** Separate Tanks

ARE GEAR

See separate list

The foregoing is a correct description.

D. Schmitt

Manufacturer.



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1935.
 Dates of Survey while building { During progress of work in shops - - Jan. 27, Feb. 5, March 13, 23, April 23, May 13, 19, 25, June 2, 3, 4.
 { During erection on board vessel - - -
 Total No. of visits

Dates of Examination of principal parts—Cylinders 23/3/36 Covers 23/3/36 Pistons 9/4/36 Piston rods

Connecting rods 9/4/36 Crank and Flywheel shaft 13/3/36 Intermediate shaft ✓

Crank and Flywheel shafts, Material Forged Mild Steel Identification Mark No 5263

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 engine has been constructed under special survey in accordance with the Rules and approved plans. The materials and workmanship are good. Stamped as follows:—

Machine No. 598
 LLOYD'S
 NO. 108 R
 Y.H. 3-6-36

This machine has been efficiently installed on board & tested under full load, overload & working conditions with satisfactory results. It has also been tried using one cylinder as an air compressor pumping up the Aux. Starting air tank & found satisfactory. After completion of trials all parts of this machine were found up examined & found in good order. This machinery is eligible in our opinion to be classed + L.M.C. 9.36 in the Register Book.

The amount of Fee ... £ 150

Travelling Expenses (if any) £

When applied for,

19

When received,

27.11.19.36

27/11

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

FRI. 13 NOV 1936

Committee's Minute

Assigned

See Nav. J.C. 2176

Rpt. 13.

REP

Date of writing Report

No. in Surveyor Reg. Book.

87208 on the

Built at

Owners Nippo

Electric Light

Is the Vessel fitted

System of Distribution

Pressure of supply

Direct or Alternating

If alternating current

Has the Automating

Generators, do they

are they over compounded

Where more than one

series with each shunt

Are all terminals adequately

short circuited, or to

Position of Generators

is the ventilation in

if situated near

are their axes of rotation

Earthing, are the

their respective generators

Main Switch Board

a fuse on each insulated

Switchboards, are

are they protected from

woodwork or other

are they constructed

permanently high in

with mica or mica

and is the frame eff

Yes

bars. Yes

Main Switchgear

switch and a

lag device

for each of

release, reverse

d.p.fuse or

Instruments on

Earth Testing, s

switches.

Switches, Circuit

Joint Boxes Sec



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Im. 9.28—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee Minutes.)