

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 9508.

Received at London Office -5 JUN 1936

Date of writing Report 9-4-1936 When handed in at Local Office 23-4-1936 Port of KOBE.

No. in Survey held at TAMA Date, First Survey 13-8-1935 Last Survey 4-4-1936  
Reg. Book. Number of Visits 23.

on the <sup>Single</sup> ~~Twin~~ <sup>Triple</sup> ~~Quadruple~~ Screw vessel MOTORSHIP "OTOWASAN MARU" Tons { Gross 9234  
Net 5338

Built at TAMA By whom built MITSUI BUSSAN KAISHA Yard No. 211 When built 1936

Owners MITSUI BUSSAN KAISHA Port belonging to KOBE

Oil Engines made at TAMA By whom made MITSUI BUSSAN KAISHA Contract No. ✓ When made 1936

Generators made at TOKIO By whom made SHIBaura ENGINEERING WORKS Contract No. 3540688  
3540689  
3540690 When made 1936

No. of Sets 3 Engine Brake Horse Power 360 EACH Nom. Horse Power as per Rule 90 EACH Total Capacity of Generators 720 Kilowatts.

OIL ENGINES, &c.—Type of Engines BURMEISTER AND WAIN. 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 310 mm Length of stroke 350 mm No. of cylinders 6 EACH No. of cranks 6 EACH

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 364 mm Is there a bearing between each crank YES

Revolutions per minute 450 Flywheel dia. 1250 mm Weight 1050 Kg. Means of ignition COMPRESSION Kind of fuel used HEAVY OIL

Crank Shaft, dia. of journals as per Rule 169 mm as fitted 180 mm Crank pin dia. 180 mm (90 mm hollow) Crank Webs Mid. length breadth 230 mm Thickness parallel to axis ✓  
Mid. length thickness 97.5 mm Thickness around eyehole ✓

Flywheel Shaft, diameter as per Rule ✓ as fitted NONE Intermediate Shafts, diameter as per Rule ✓ as fitted ✓ Thickness of cylinder liners 24 mm ✓

Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched 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

Cooling Water Pumps, No. ONE (DEPENDENT.) Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Lubricating Oil Pumps, No. and size ONE SET. GEAR PUMP TYPE COUPLED DIRECT EACH ENGINE CAPACITY: 6.5 M<sup>3</sup> PER HOUR

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 BY AIR HOSE

Is there a drain arrangement fitted at the lowest part of each receiver YES

High Pressure Air Receivers, No. NONE 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 400 LITER Internal diameter 550 mm thickness SHELL 12 mm  
TAP 16 mm BOTTOM 21 mm

Seamless, lap welded or riveted longitudinal joint RIVETED Material STEEL Range of tensile strength 26-30 T/□ Working pressure by Rules 30.4 kg/cm<sup>2</sup>  
approx. for 25 kg.  
See Cert.

ELECTRIC GENERATORS:—Type DIRECT CURRENT COMPOUND

Pressure of supply 220 volts. Load 1090 Amperes. Direct or Alternating Current DIRECT

If 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

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

PLANS. Are approved plans forwarded herewith for Shafting 10-10-35 Receivers 28-6-35 Separate Tanks 5-12-35  
(If not, state date of approval)

SPARE GEAR In accordance with the Rules' requirements, in addition, the following important spare gear has been placed on board:—

ONE CYLINDER LINER WITH PACKING GLAND.

TWO CYLINDER COVER WITH STUDS.

TWO PISTON COMPLETE WITH RINGS &amp; GUDGEON PIN.

THREE SETS OF GOVERNOR SPRING.

The foregoing is a correct description.

PER PRO MITSUI BUSSAN KAISHA, LTD.,

M. Saito

Manufacturer.

SUB-MANAGER SHIPBUILDING DEPT.



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Dates of Survey while building { During progress of work in shops - - } 1935: AUG. 13. SEP. 28. OCT. 10. NOV. 6. 8. 19. 20. 21. 22. 25. DEC. 4. 11. 12. 24.  
 { During erection on board vessel - - - } 1936: JAN. 14. 15. 23. 26. MAR. 3. 5. 28. 31. APRIL 4.  
 Total No. of visits 23.

Dates of Examination of principal parts—Cylinders 25-11-35 Covers 25-11-35 Pistons 6-11-35 Piston rods ✓

Connecting rods 28-9-35 Crank and Flywheel shaft 8-11-35 Intermediate shaft ✓

Crank and Flywheel shaft, Material STEEL Identification Mark { 4711...24-10-35  
4711...12-11-35  
4711...24-10-35 } 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, &c.

Each engine was constructed under Special Survey in accordance with the Rules and approved plans.

The workmanship and materials are good.

On completion the engines and generators were efficiently installed in the vessel and tried under full working conditions with satisfactory results.

Im. 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.....

Committee's Minute FRI. 12 JUN 1936

Assigned

See minute on J.E. Rpt.

M. Kamakura.  
 Surveyor to Lloyd's Register of Shipping.



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