

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 7906

Received at London Office

27 SEP 1932

Date of writing Report Aug: 31<sup>st</sup> 1932 When handed in at Local Office 3/9/ 1932 Port of Kobe.

No. in Survey held at Kobe Date, First Survey 19-8-31 Last Survey 30-8- 1932

Reg. Book. Single on the Twin Triple Quadruple Screw vessel NAGASAKI YARD N°502. Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_

Built at Nagasaki By whom built Mitsubishi Dockyard Co Ltd Yard No. 502 When built 1932

Owners Mm Osaka Shosen Kaisha. Port belonging to Osaka.

Oil Engines made at Kobe By whom made Mitsubishi Dockyard Co Contract No. #141. When made 1932

Generators made at Nagasaki By whom made do Contract No. 502 When made 1932

No. of Sets 3 Engine Brake Horse Power 350 Nom. Horse Power as per Rule \_\_\_\_\_ Total Capacity of Generators 600 Kilowatts.

**OIL ENGINES, &c.**—Type of Engines Mitsubishi Vickers 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 46 Kg/cm² Diameter of cylinders 400 mm Length of stroke 450 mm No. of cylinders 5 No. of cranks 3

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 456 mm Is there a bearing between each crank Yes

Revolutions per minute 340 Flywheel dia. 1700 mm Weight 2,080 kg. Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule 218 mm Crank pin dia. 235 mm Crank Webs Mid. length breadth 350 mm Thickness parallel to axis shrunk

as fitted 235 mm Mid. length thickness 123 mm Thickness around eyehole \_\_\_\_\_

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 37.5 mm

as fitted \_\_\_\_\_ 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 water cooled

Cooling Water Pumps, No. (1) 140 dia x 40 mm stroke Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size (1) 80 x 40 mm attached & driven by end of crank shaft.

Air Compressors, No. 2 sets Corbin 3279 No. of stages 2 Diameters 80-310 x 360 mm Stroke 150 mm Driven by Generator through magnetic clutch

Scavenging Air Pumps, No. 2 sets Diameter 200 mm Stroke 200 mm Driven by \_\_\_\_\_

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

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces 2 sets

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

High Pressure Air Receivers, No. 2 Cubic capacity of each 2.5 m³ Internal diameter 150 mm thickness 10 mm

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 45-55 kg/cm² Working pressure by Rules 5 kg/cm²

Starting Air Receivers, No. 2 Total cubic capacity 2.5 m³ Internal diameter 150 mm thickness 10 mm

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 45-55 kg/cm² Working pressure by Rules 5 kg/cm²

**ELECTRIC GENERATORS:**—Type Multipole (See Nagasaki Cert N°579.)

Pressure of supply 225 volts. Load 890 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 \_\_\_\_\_ 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 approved 8-9-31 Receivers Yes Separate Tanks Yes

(If not, state date of approval)

**SPARE GEAR**

List to be forwarded later.

The foregoing is a correct description.  
 KOBE SHIPYARD & ENGINE WORKS, M. Z. K., LTD.  
A. A. Kudoji. Manufacturer.  
 General Manager.



During progress of work in shops - 1931. Aug 19. 31. Sept 30. Oct 10. 27. 31. Nov 7. 11. 24. Dec. 2. 4. 12. 15. 26. 1932 Jan 12. 13. 14. 19. 20. 22. Feb. 3. 22. 24. Mar. 4. 7. 8. 11. 12. 16. 19. 22. 23. 26. 28. 30. 31.  
 During erection on board vessel - April 2. 4. 6. 9. 14. 15. 19. 20. 21. 22. 23. 25. 30. May 12. 25. 26. June 3. 18. 20. 23. July 1. 2. 4. 6. 14. 16. Aug. 6. 9. 11. 15. 17. 20. 23. 25. 27. 30.  
 Total No. of visits 22 3007

Dates of Examination of principal parts—Cylinders 24-11-31 26-5-32 28-5-32 Covers 3-2-32 26-12-31 27-4-32 20-6-32. Pistons 4-12-31 27-4-32 20-6-32 Piston rods 20-4-32

Connecting rods 30-4-32 2-7-32 16-7-32 Crank and Flywheel shaft 4-3-32 20-4-32 23-3-32 Intermediate shaft

Crank and Flywheel shaft, Material O.H. Steel Identification Mark 3184 3191 Intermediate shafts, Material Identification Marks

Is this machinery duplicate of a previous case Yes If so, state name of vessel Nagasaki N° 501 Kobe Regt N° 7814

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery described in this report has been constructed under special survey, in accordance with the requirements of the Rules, & approved plans. The materials have been tested, found efficient & the workmanship throughout is good. They have been tested, on test bench, under full load, overload, parallel running & governor test, with satisfactory results, & are eligible in my opinion to have the Record of + L.M.C. in the Register Book. These machines have now been shipped to Nagasaki, where it is intended to install them on board ship N° 502.

For identification purposes these engines have been stamped on crank case as follows.

ENG N° 141	ENG N° 142	ENG N° 143
<div>           LLOYD'S            N° 41.            H.D.B.R.            27.8.32         </div>	<div>           LLOYD'S            N° 42.            H.D.B.R.            27.8.32.         </div>	<div>           LLOYD'S            N° 43.            H.D.B.R.            27.8.32.         </div>

The amount of Fee ... £975-  
 Travelling Expenses (if any) £80-  
 When applied for, 2 Sept. 1932.  
 When received, 27.4.1933

H.D. Buchanan  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 19 APR 1933

Assigned See Nag 1878