

# COPY. REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 6863

Date of writing Report 19 When handed in at Local Office 7-3-1930 Port of Kobe  
 No. in Survey held at Kobe Date, First Survey 14<sup>th</sup> July 1929 Last Survey March 1930  
 Reg. Book. Number of Visits 80  
 on the Single }  
 Twin } Screw vessel  
 Triple }  
 Quadruple }  
 Built at Nagasaki By whom built Mitsubishi Zosen Kaisha Ltd Yard No. 471 When built 1930  
 Owners Osaka Shosen Kaisha Port belonging to Osaka  
 Oil Engines made at Kobe By whom made Mitsubishi Zosen Kaisha Ltd Contract No. 87-909 When made 1930  
 Generators made at Nagasaki By whom made " " " Contract No. When made 1930  
 No. of Sets 2 Engine Brake Horse Power 390 each Nom. Horse Power as per Rule 81 Total Capacity of Generators 780 Kilowatts.

**OIL ENGINES, &c.**—Type of Engines Mitsubishi Vickers 2 or 4 stroke cycle 4 Single or double acting Single  
 Maximum pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 300 mm Length of stroke 450 mm No. of cylinders 6 No. of cranks 6  
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 355 mm Is there a bearing between each crank Yes  
 Revolutions per minute 340 Flywheel dia. 1,700 mm Weight abt 355 kg Means of ignition Compression Kind of fuel used Diesel oil F.P. 150° F  
 Crank Shaft, dia. of journals as per Rule 177 mm as fitted 185 mm Crank pin dia. 185 mm Mid. length breadth 270 mm Thickness parallel to axis shrunk  
 Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 30 mm  
 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 @ 110 mm x 45 mm Gland D. Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
 Lubricating Oil Pumps, No. and size 1 @ 110 mm x 45 mm Gear driven  
 Air Compressors, No. No. of stages Diameters Stroke Driven by  
 Scavenging Air Pumps, No. Diameter Stroke 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 What means are provided for cleaning their inner surfaces  
 Is there a drain arrangement fitted at the lowest part of each receiver  
 High Pressure Air Receivers, No. 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. 1mc Total cubic capacity abt 267 lbs Internal diameter 21" thickness .625"  
 Seamless, lap welded or riveted longitudinal joint D.R.D.B.S. Material Steel Range of tensile strength 28/35 tons Working pressure by Rules 645 lbs

**ELECTRIC GENERATORS:**—Type Mitsubishi compound wound.  
 Pressure of supply 225 volts. Load 1160 per machine 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  
 Generators, do they comply with the requirements regarding rating Yes, Tested at Nagasaki 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 25<sup>th</sup> April 1929 Receivers 3<sup>rd</sup> June 1929 Separate Tanks

**SHAFTING AND GEAR**

See Separate List

The foregoing is a correct description,

Manufacturer.



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Lloyd's Register  
Foundation

009869-009878-0123



Dates of Survey while building { During progress of work in shops - - } From 4<sup>th</sup> July 1929 To March 3<sup>rd</sup> 1930  
 { During erection on board vessel - - - }  
 Total No. of visits 50

Dates of Examination of principal parts—Cylinders 9/10 6/11 7/12 Covers 24/9 25/9 1-2-6-25-27 13-14 12 Pistons 28/8/11/12/13/11 Piston rods ✓  
 Connecting rods 5/9 25/10 Crank and Flywheel shaft 30/7/29 9/8/29 Intermediate shaft ✓  
 Crank and Flywheel shaft, Material 04 Steel Identification Mark VS 3449 VS 3445-0 3833 J.L. 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.)  
 The crank shafts of these engines were supplied by Messrs Krupp, Essen, Germany in finished condition.  
 These engines have been constructed under special survey in accordance with the Rules & approved plans. The materials have been tested found efficient & the workmanship throughout is good. They have been tried under full load & overload working conditions, connected to their generators, & run in parallel test, also the efficiency of the governors was tested & the whole found satisfactory.  
 This machinery is eligible in my opinion for the Record of + L.M.C. in the Register Book.  
 They have now been shipped to Nagasaki where it is intended to install them on Vessel No 471, & have been stamped as follows.

ENG: 89. LLOYDS N° 2406 R. H.O.B. 19-2-30	ENG: 90 LLOYDS N° 2407 R. H.O.B. 19-2-30	ENG: 91 LLOYDS N° 2408. R. H.O.B. 19-2-30
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The amount of Fee ... £ 975<sup>00</sup> :  
 Travelling Expenses (if any) £ 90<sup>00</sup> :  
 When applied for, 19...  
 When received, 19...

For W. Kimball retd  
 H.D. Buchanan  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned

To Ward Nagasaki Rep  
 30/2/30