

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 7106

Received at London Office 27 OCT 1930

Date of writing Report 11-10-1930 When handed in at Local Office 11-10-1930 Port of KOBE

No. in Survey held at KOBE Date, First Survey AUG: 20<sup>TH</sup> 1929 Last Survey AUG 16<sup>TH</sup> 1930  
Reg. Book. Number of Visits 79

on the <sup>Single</sup> ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel (MITSUBISHI, NAGASAKI YARD No 474) Tons { Gross Net

Built at NAGASAKI By whom built MITSUBISHI ZOSEN KAISHA LTD Yard No. 474 When built 1930

Owners OSAKA SHOSEN KAISHA LTD Port belonging to OSAKA

Oil Engines made at KOBE By whom made MITSUBISHI ZOSEN KAISHA LTD Contract No 98-99-100 When made 1930

Generators made at NAGASAKI By whom made DO DO Contract No. When made 1930

No. of Sets 3 Engine Brake Horse Power 390 Nom. Horse Power as per Rule 81 Total Capacity of Generators 750 Kilowatts.

OIL ENGINES, &c.—Type of Engines MITSUBISHI VICKERS, 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 30 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. 1700 mm Weight 3455 kg Means of ignition COMPRESSION Kind of fuel used DIESEL: F.P. ABOVE 150° F.

Crank Shaft, dia. of journals as per Rule 177 mm as fitted 185 mm Crank pin dia. 185 mm Crank Webs Mid. length breadth 270 mm Thickness parallel to axis Crank Mid. length thickness 98 mm Thickness around eyehole

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 de-clutched YES Means of lubrication FORCED

Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled & lagged with non-conducting material YES

Cooling Water Pumps, No. 1 @ 110 mm x 45 mm GEAR 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. 2, INDEPENDENT, No. of stages 3 Diameters 75 mm x 295 mm x 340 mm Stroke 180 mm Driven by E. MOTOR

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. ONE Total cubic capacity AST: 267 LITRES Internal diameter 21" thickness .625"

Seamless, lap welded or riveted longitudinal joint D.R.D.B.S. Material Q.H. STEEL Range of tensile strength 28-35 TONS Working pressure by Rules 645-685

ELECTRIC GENERATORS:—Type MITSUBISHI COMPOUND WOUND

Pressure of supply 225 volts. Load 1160 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 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

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 LISTS ATTACHED HEREWITH.

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

Manufacturer.



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Lloyd's Register  
Foundation

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Dates of Survey while building  
 During progress of work in shops - 1929, Aug. 20, SEPT 24, OCT 9, 24, 26, Nov: 20, DEC. 7, 21, 1930, Jan: 13, FEB: 13, MARCH. 18, 22, 24, 28, 29, 31, APRIL. 1, 2, 4, 7, 10, 12, 14, 16, 18, 19, 21, 23, 25, 27, 29, 30, JUNE. 3, 5, 7, 9, 11, 13, 14, 18, 19, 21, 25, 26, 27, JULY 1, 2, 4, 5, 10, 11, 12, 14, 16, 18, 19, 22, 25, 26, AUG. 12, 15, 16.  
 During erection on board vessel - 11  
 Total No. of visits 79

Dates of Examination of principal parts—Cylinders 5/6/30 5/6/30 5/7/30 Covers 20, 22, 26, 29 5-30 9, 19/6/30 6, 9, 5, 10, 2, 14, 15, 17, 19, 20  
 Intermediate shaft 27 & 30/8/29  
 Identification Marks LLOYD'S No 2781 NK 19 30 15 27-8-29 30-8-29

Connecting rods 12/4/30 & 10/5/30 Crank and Flywheel shaft 27 & 30/8/29 Intermediate shafts, Material Identification Marks  
 Crank and Flywheel shaft, Material O.N. STEEL Identification Marks

Is this machinery duplicate of a previous case YES If so, state name of vessel NAG: YARD N° 473. KOBSE RPT: N° 7009

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 tested under full load, & overload working conditions, connected to their Generators, run in parallel, & the efficiency of governors tried. Upon completion of trials, engines were sprung up, cleaned, examined & found in good condition.

These machines are 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 N° 474 & have been stamped as follows.

	ENG N° 98 LLOYD'S N° 2784 H.O.B. R 16-8-30	ENG N° 99 LLOYD'S N° 2786 H.O.B. R 16-8-30	ENG N° 100 LLOYD'S N° 2787 H.O.B. R 16-8-30
Mark on Generator	LLOYD'S N° 337 B K.K. 3-7-30	LLOYD'S N° 337 A R K.K. 4-7-30	LLOYD'S N° 337 B R K.K. 5-7-30

The amount of Fee ... £ : : When applied for, 19.....  
 Travelling Expenses (if any) £ : : When received, 19.....

H.S. Buchanan,  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned