

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 9536

13 JUN 1936

Received at London Office

Date of writing Report 12<sup>th</sup> May 1936 When handed in at Local Office 20<sup>th</sup> May 1936 Port of Kobe

No. in Survey held at KOBE & OH, HARIMA. Date, First Survey 26<sup>th</sup> March 1935 Last Survey 18<sup>th</sup> April 1936  
Reg. Book. Number of Visits 40

on the <sup>Single</sup> ~~Triple~~ ~~Quadruple~~ Screw vessel **KASHII MARU** Tons <sup>Gross</sup> 6823  
~~Net~~ 3663

Built at OH, HARIMA. By whom built HARIMA SHIPBUILDING & ENG. CO. LTD. Yard No. 215 When built 1936.

Owners KOKUSAI KISEN KAISHA. Port belonging to TOKIO.

Oil Engines made at KOBE. By whom made KOBE STEEL WORKS, LTD. Contract No. 2334/5 When made 1935.

Generators made at NAGASAKI. By whom made MITSUBISHI DENKI KAISHA. Contract No. When made 1935.

No. of Sets 3. Engine Brake Horse Power 240 Nom. Horse Power as per Rule 51 Total Capacity of Generators 480 Kilowatts.

OIL ENGINES, &c. Type of Engines HEAVY OIL - AIRLESS INJECTION 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 290 mm Length of stroke 430 mm No. of cylinders 4 No. of cranks 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 349 mm Is there a bearing between each crank yes

Revolutions per minute 330 Flywheel dia. 1400 mm Weight 2830 Kgo. Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 164.5 mm as fitted 184 mm Crank pin dia. 184 mm Crank Webs Mid. length breadth 282 mm Thickness parallel to axis shrunken Mid. length thickness 93 mm Thickness around eye-hole

Flywheel Shaft, diameter as per Rule 164.5 mm as fitted 184 mm Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 25 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 yes.

Cooling Water Pumps, No. 3 independent Electric the sea suction provided with an efficient strainer which can be cleared within the vessel yes.

Lubricating Oil Pumps, No. and size 1 on each engine - gear type.

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 Steam.

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 500 litres Internal diameter 700 mm thickness 14 mm

Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 44-50 kg/cm<sup>2</sup> Working pressure by Rules 30 kg/cm<sup>2</sup>

ELECTRIC GENERATORS: Type Compound-wound. Direct Current.

Pressure of supply 225v. volts. Load 710 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. no (see letter), 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 21/6/35. Receivers 10/6/35. Separate Tanks 20/8/35 (see Kawasacki N°591).

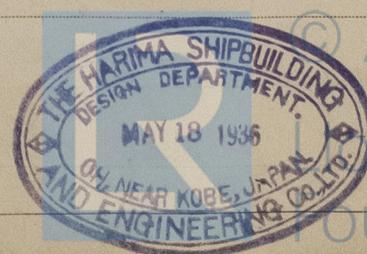
SPARE GEAR The spare gear is in accordance with the requirements of the Rules

with the following important additional items:-

- 2 cylinder covers, 2 cylinder liners, 7 sets exhaust valves complete, 1 inlet valve complete, 1 safety valve complete, 1 starting air valve complete, 1 set coupling bolts
- 1 set main bearing brasses with studs & nuts, 2 sets top end brasses, 2 sets bottom end brasses with bolts & nuts, 2 pistons complete with rings & gudgeon pins, 6 sets piston rings.

The foregoing is a correct description,  
*S. Murata*

Manufacturer.



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Dates of Survey while building { During progress of work in shops - - 1935 Mar. 26, 28 Apr. 5, 8, 11, 13, 20, Aug 13, 15, 20, 22, 30 Sept 2, 5, 7, 10, 12, 14, 18, 21, 23, Nov, 5, 9, 11, 18, 23, 27 Dec 28  
 During erection on board vessel - - - 1936 Feb. 5, 17, Mar. 12, 14, 19, 24, 28 Apr. 9, 13, 16, 18.  
 Total No. of visits 40

Dates of Examination of principal parts—Cylinders 1/11/35 Covers 14/9/35 Pistons 22/8/35 Piston rods ✓

Connecting rods 30/8/35 Crank and Flywheel shaft 21/6/35 Intermediate shaft ✓

Crank and Flywheel shaft, Material Forged Steel Identification Mark 4477 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 & Approved plans.

The Workmanship & Materials are good.

On completion, the engines & generators were installed in the vessel in accordance with the Rules & tried under full working conditions with satisfactory results.

100, 7, 29—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

*E. Macpherson*, *Y. Yamada*  
 Surveyor to Lloyd's Register of Shipping.

TUE. 23 JUN 1936

Committee's Minute

Assigned

See other Nos. 96, 9536



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