

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 8981

Date of writing Report _____ 19 _____ When handed in at Local Office _____ 19 _____ Port of **KOBE**
 Received at London Office **11 APR 1935**
 No. in Survey held at **KOBE**. Date, First Survey **10-3-34**. Last Survey **7-2-1935**
 Reg. Book. Number of Visits **43**.

Single
 on the ~~Twin~~
 Triple
 Quadruple } Screw vessel

"KONGO MARU"

Tons { Gross **7061**.
 Net **3761**.

Built at **HARIMA**. By whom built **HARIMA S.B. & ENG CO. LD.** Yard No. **205**. When built **1935**.

Owners **KOKUSAI KISEN KABUSHIKI KAISHA**. Port belonging to **TOKIO**.

Oil Engines made at **KOBE**. By whom made **KAWASAKI DOCKYARD CO. LTD** Contract No. **1600** When made **1935**

Generators made at **KOBE**. By whom made **KAWASAKI DOCKYARD CO. LTD** Contract No. **v.** When made **1935**.

No. of Sets **3** Engine Brake Horse Power **493** Nom. Horse Power as per Rule **98**. Total Capacity of Generators **990** Kilowatts.

OIL ENGINES, &c.—Type of Engines **M.A.N.** 2 or 4 stroke cycle **4** Single or double acting **SINGLE**.

Maximum pressure in cylinders **49 kg/cm²** Diameter of cylinders **285 mm** Length of stroke **420 mm** No. of cylinders **8** No. of cranks **8**

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **328 mm** Is there a bearing between each crank **YES**

Revolutions per minute **370** Flywheel dia. **1700 mm** Weight **1770 kg** Means of ignition **COMPRESSION** Kind of fuel used **HEAVY OIL**

Crank Shaft, dia. of journals as per Rule **167.3 mm** as fitted **170 mm** Crank pin dia. **170 mm** Crank Webs Mid. length breadth **280 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 **20 mm**

Is a governor or other arrangement fitted to prevent racing of the engine **YES** Means of lubrication **forced lub.**

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. **3** **AUXILIARY** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **YES**

Lubricating Oil Pumps, No. and size **ONE GEAR PUMP ON EACH ENGINE**

Air Compressors, No. **2** No. of stages **2** Diameters **240 x 310 mm** Stroke **180 mm** Driven by **ELECTRIC MOTOR**

Scavenging Air Pumps, No. **✓** Diameter **✓** Stroke **✓** Driven by **AUXILIARY GENERATOR**

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. **✓** 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. **1** Total cubic capacity **600 LITRE** Internal diameter **800 mm** thickness **5/8**

Seamless, lap welded or riveted longitudinal joint **RIVETED** Material **STEEL** Range of tensile strength **28-32 T/D** Working pressure by Rules **30 kg**

ELECTRIC GENERATORS:—Type **Drip proof self ventilating Compound Wound**

Pressure of supply **225** volts. Load **1465** Amperes. Direct or Alternating Current **D.C.**

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 **26.10.33** Receivers **10.5.34** Separate Tanks **14.4.33**

SPARE GEAR

3 CYLINDER COVERS COMPLETE WITH VALVES. **4** SETS. CRANK PIN BEARING BOLTS. **4** SETS. INLET VALVES.

3 CYLINDER LINERS. **4** SETS. MAIN BEARING BOLTS. **8** LENGTHS FUEL PIPES.

4 SETS. CYLINDER COVER STUDS & NUTS. **4** SETS. FUEL CAMS COMPLETE.

20 SETS. PISTON RINGS. **8** SETS. FUEL PUMPS COMPLETE.

4 SETS. TOP & BOTTOM END BRASSES. **4** SETS. SAFETY VALVES.

3 GUDGEON PINS. **24** SETS. NEEDLE VALVES.

3 SETS. PISTONS. **4** SETS. STARTING VALVES.

4 SETS. CONNECTING ROD BOLTS. **8** SETS. EXHAUST VALVES.

The foregoing is a correct description
 AND ENGINEERING CO., LTD.

THE HARIMA SHIP-BUILDING

M. Hirata
 for DIRECTOR.

Manufacturer.



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Lloyd's Register
 Foundation

Dates of Survey while building
 During progress of work in shops - - - MAR/34. 10. JUN/34. 19. SEP/34. 20. 22. 27. OCT/34. 1. 5. 10. 11. 12. 16. 19. 22. 23. 24. 25. 26. 30. NOV/34. 1. 5. 6. 10. 12. 14. 15. 16. 19. 21. 22. 24.
 During erection on board vessel - - - DEC/34. 12. 21. 22. 24. 27. 28. JAN/35. 10. FEB/35. 7.
 DEC/34. 3. JAN/35. 21. 28. FEB/35. 21. 25.
 Total No. of visits

Dates of Examination of principal parts—Cylinders 14-11-34. Covers 14-11-34. Pistons 21-11-34. Piston rods 24-10-34.

Connecting rods 1-11-34. Crank and Flywheel shaft 1. 3. 9. - 3-34 19-6-34 11-10-34. Intermediate shaft

Crank and Flywheel shaft, Material STEEL. Identification Mark LR No. 3970, 3971, 3972. 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, and eligible in our opinion for the record of "ELECTRIC LIGHT."

Rpt. 13.
 RE
 Date of writ
 No. in Reg. Book
 Built at
 Owners
 Electric L
 Is the Vessel
 System of
 Pressure of
 Direct or Al
 If alternating
 Has the Auto
 Generators,
 are they over co
 Where more than
 series with each
 Are all terminals
 short circuited, o
 Position of Ge
 is the ventilation
 if situated near
 are their axes of
 Earthing, are the
 their respective ge
 Main Switch Bo
 a fuse on each insu
 Switchboards, a
 are they protected fr
 woodwork or other c
 are they constructed
 permanently high ins
 with mica or mica
 and is the frame effec
 YES.
 bars YES.
 Main Switchgear,
 HAS A TRIPLE POL
 OUTGOING CIRCUIT
 Instruments on mai
 Earth Testing, state
 SWITCH ON EACH
 Switches, Circuit B
 Joint Boxes Section

Im. 7.30—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ 61 : 5 - 0
 Travelling Expenses (if any) £ : :
 When applied for, 19/2/1935
 When received, 22/2/1935

A. E. Munro
 Surveyor to Lloyd's Register of Shipping.
 R. Chirgaw

FRI. 17 MAY 1935
 FRI. 20 SEP 1935

Committee's Minute
 Assigned
 See Kob J.E. 8987
 FRI. 26 APR 1935

