

4c. **REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.**

No. 8656.

Received at London Office

23 JUL 1934

of writing Report 10 When handed in at Local Office 10 Port of **KOBE.**
in Survey held at **KOBE.** Date, First Survey **18-11-33.** Last Survey **22-6-1934.**
Book. Number of Visits

Single
on the ~~Twin~~ **Twin** Screw vessel **'TOR MARU'** Tons { Gross **10052.**
Triple Net **9038.**
Quadruple
ilt at **KOBE** By whom built **KAWASAKI DOCKYARD Co.** Yard No. **572.** When built **1934.**
ners **IINO SHOJI KABUSHIKI KAISHA.** Port belonging to **NAKAMAIZURU.**

Engines made at **KOBE** By whom made **KAWASAKI DOCKYARD Co.** Contract No. **206-7-8.** When made **1934.**
nd generators made at **KOBE.** By whom made **KAWASAKI DOCKYARD Co.** Contract No. **206-7-8.** When made **1934.**
of Sets **3.** Engine Brake Horse Power **440.** Nom. Horse Power as per Rule **86.** Total Capacity of Generators **885** Kilowatts.

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

imum pressure in cylinders **49 kg/cm²** Diameter of cylinders **285 mm.** Length of stroke **420 mm.** No. of cylinders **7.** No. of cranks **7.**

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

olutions per minute **375.** Flywheel dia. **1700 mm.** Weight **1770 kg.** Means of ignition **COMPRESSION.** Kind of fuel used **HEAVY OIL.**

ank Shaft, dia. of journals as per Rule **169.3.** Crank pin dia. **170 mm.** Mid. length breadth **280 mm.** Thickness parallel to axis **✓**

as fitted **170 mm.** Crank Webs Mid. length thickness **90 mm.** Thickness around eyehole **✓**

as per Rule **✓** Intermediate Shafts, diameter as per Rule **✓** Thickness of cylinder liners **17.5 mm.** **✓**

as fitted **✓** as fitted **✓**

a governor or other arrangement fitted to prevent racing of the engine when decelerated **YES.** Means of lubrication **FORCED.** **✓**

e the cylinders fitted with safety valves **YES.** **✓** Are the exhaust pipes and silencers water cooled or lagged with non-conducting material **LAGGED.** **✓**

oling Water Pumps, No. **2.** **✓** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **YES.**

bricating Oil Pumps, No. and size **1 SET GEAR PUMP TYPE COUPLED DIRECT EACH ENGINE CAPACITY 6 M³/H.** **✓**

Compressors, No. **2.** No. of stages **3.** Diameters **350. 295. 100 mm.** Stroke **240 mm.** Driven by **AUX DIESEL ENGINES.**

ivenging Air Pumps, No. **✓** Diameter **✓** Stroke **✓** Driven by **✓**

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

the internal surfaces of the receivers be examined **YES.** What means are provided for cleaning their inner surfaces **STEAM.**

here a drain arrangement fitted at the lowest part of each receiver **YES.**

gh Pressure Air Receivers, No. **✓** Cubic capacity of each **✓** Internal diameter **✓** thickness **✓**

unless, lap welded or riveted longitudinal joint **✓** Material **✓** Range of tensile strength **✓** Working pressure by Rules **✓**

urting Air Receivers, No. **1.** Total cubic capacity **400 LITRES.** Internal diameter **406.4 mm.** thickness **11.78 mm.** **✓**

unless, lap welded or riveted longitudinal joint **SEAMLESS.** **✓** Material **STEEL.** **✓** Range of tensile strength **28.32 T.P.** Working pressure by Rules **30 kg/cm².** **✓**

ELECTRIC GENERATORS:—Type **DIRECT CURRENT COMPOUND.**

essure of supply **230** volts. Load **1283.** Amperes. Direct or Alternating Current **DIRECT.**

alternating current system, state frequency of periods per second **✓**

s the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off **YES.**

nerators, do they comply with the requirements regarding rating **YES.** are they compound wound **YES.**

they over compounded 5 per cent. **YES.** , if not compound wound state distance between each generator **✓**

in adjustable regulating resistance fitted in series with each shunt field **YES.** Are all terminals accessible, clearly marked, and furnished with sockets **YES.**

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.**

ANS. Are approved plans forwarded herewith for Shafting **20-3-33.** Receivers **13-4-34.** Separate Tanks **11-10-33.**

(If not, state date of approval)

ARE GEAR PLACED ON BOARD.

✓ CYLINDER LINER. 1. ✓ CYLINDER RELIEF VALVES. 4 SETS.

✓ SKEW GEAR. 1 SET. ✓ FUEL VALVES. 8 SETS.

✓ CYLINDER COVERS COMPLETE. 3 SETS. ✓ INLET VALVES. 4 SETS.

✓ PISTON RINGS. 21 SETS. ✓ EXHAUST VALVES. 4 SETS.

✓ CYLINDER COVER STUDS & NUTS. 1 SET. ✓ AIR COMPRESSOR PISTON RINGS 1st 2nd 3rd STAGES. 1 SET.

✓ PISTON COMPLETE WITH GUDGEON & RINGS. 4 SETS. ✓ AIR COMPRESSOR SUCTION VALVES. 1st 2nd 3rd STAGES. 2 SETS.

✓ CRANKPIN BEARING BOLTS & NUTS. 2. ✓ AIR COMPRESSOR DELIVERY VALVES. 1st 2nd 3rd STAGES. 2 SETS.

✓ MAIN BEARING BOLTS & NUTS. 4. ✓ FUEL PUMP. 3 SETS.

The foregoing is a correct description,

T. Okano Chief Engineer Kawasaki Dock-
yard Co. Manufacturer.



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Dates of Survey while building { During progress of work in shops - - } Nov/33. 18.21. Dec/33. 6.7.9.14.18.19.24. JAN/34. 15.23.31. Feb/34. 8.12.14.16. 20.23. Mar/34. 8.14.15.26. APR/34. 4.12.16.
{ During erection on board vessel - - } May/34. 9.16.15.19. JUN/34. 1.2.4.12.22.
Total No. of visits 33.

Dates of Examination of principal parts—Cylinders 9. 23-1-34. 24-1-34 Covers 15-3-34. Pistons 26-3-34. Piston rods 14-3-34.

Connecting rods 23-2-34. Crank and Flywheel shaft 18-11-33. Intermediate shaft

Crank and Flywheel shaft, Material STEEL. Identification Mark LRM 3667. 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 materials and workmanship 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 my opinion for the record of "ELECTRIC LIGHT".

The amount of Fee ... £ 61 : 18 : 0

Travelling Expenses (if any) £

When applied for,

22 June 1934

When received,

23 June 1934

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

Committee's Minute

TUE. 31 JUL 1934

Assigned

See other G E Rpt
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