

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 8857

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of 21 JAN 1935

No. in Survey held at Reg. Book. KOBE Date, First Survey 14-2-34 Last Survey 11-12-1934 Number of Visits 37

on the <sup>Single</sup> ~~Triple~~ ~~Quadruple~~ Screw vessel MOTOR VESSEL "KYOKUTO MARU"

Tons { Gross 10052 Net 5821

Built at KOBE By whom built KAWASAKI DOCKYARD CO. Yard No. 584 When built 1934

Owners IINO SHOJI KABUSHIKI KAISHA Port belonging to NAKAMAIZURU

Oil Engines made at KOBE By whom made KAWASAKI DOCKYARD CO. Contract No. 210 211 When made 1934

Generators made at KOBE By whom made KAWASAKI DOCKYARD CO. Contract No. 13153 13154 13155 When made 1934

No. of Sets 3 Engine Brake Horse Power 440 Nom. Horse Power as per Rule 86 Total Capacity of Generators 885 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/cm<sup>2</sup> Diameter of cylinders 285 mm Length of stroke 420 mm No. of cylinders 7 No. of cranks 7

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 375 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 169.3 mm as fitted 170 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 280 mm Thickness parallel to axis shrunk Mid. length thickness 90 mm Thickness around eyehole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 17.5 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. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Lubricating Oil Pumps, No. and size 1 SET GEAR PUMP TYPE COUPLED DIRECT EACH ENGINE CAPACITY 6 M<sup>3</sup>/HR.

Air Compressors, No. 2 No. of stages 3 Diameters 350, 295, 160 mm Stroke 240 mm Driven by AUX DIESEL ENGINES

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 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 400 LITRES Internal diameter 406.4 mm thickness 11.78 mm

Seamless, lap welded or riveted longitudinal joint SEAMLESS Material STEEL Range of tensile strength 28/32 T/D Working pressure by Rules 30 kg/cm<sup>2</sup>

ELECTRIC GENERATORS:—Type DIRECT CURRENT COMPOUND

Pressure of supply 230 volts Load 1283 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. 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 11-10-33 Receivers 7-12-33 Separate Tanks 5-7-34

## SPARE GEAR

- ONE CYLINDER LINER ✓ 4 SETS. CYLINDER RELIEF VALVES ✓
- 1 SET. SKEN GEAR ✓ 8 SETS. FUEL VALVES ✓
- 3 SETS. CYLINDER COVERS COMPLETE ✓ 4 SETS. INLET VALVES ✓
- 21 SETS. PISTON RINGS ✓ 4 SETS. EXHAUST VALVES ✓
- 1 SET. CYLINDER COVER STUDS & NUTS ✓ 1 SET. AIR COMPRESSOR PISTON RINGS ✓
- 4 SETS. PISTON COMPLETE WITH GUIDERON & RINGS ✓ 2 SETS. AIR COMPRESSOR SUCTION VALVES ✓
- 2 SETS. CRANKPIN BEARING BOLTS & NUTS ✓ 2 SETS. AIR COMPRESSOR DELIVERY VALVES ✓
- 4 SETS. MAIN BEARING BOLTS & NUTS ✓ 3 SETS. FUEL PUMP ✓

The foregoing is a correct description,

*Yoshitaka Osho* Kawasaki Dockyard Manufacturer.



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Dates of Survey while building { During progress of work in shops - - } Feb/34. 14.17. MAY/34. 25. 26. 29. 30. JUN/34. 19. 30. JUL/34. 3. 6. 10. 11. 13. 20. AUG/34. 2. 8. 15. 18. 25. 29. SEP/34. 1. 2. 10. 15. 16. 25. 26. OCT/34. 7.  
 { During erection on board vessel - - - } OCT/34. 19. 20. 22. 23. NOV/34. 9. 17. 20. 27. DEC/34. 11.  
 Total No. of visits 37.

Dates of Examination of principal parts—Cylinders 11. 7. 34; 2. 5. 34 Covers 25-8-34. Pistons 25-26/5/34. Piston rods ✓

Connecting rods 23. 7. 34. Crank and Flywheel shaft 10. 7. 34. Intermediate shaft ✓  
 LR No 3863 17. 1. 34.  
 3897 25. 1. 34.

Crank and Flywheel shaft, Material STEEL. Identification Mark 3916. 20. 2. 34 Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case YES. If so, state name of vessel "TOR MARU"

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 my opinion for the record of "ELECTRIC LIGHT".

Im. 7. 26—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.....

(See other reports)  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. [ 25 JAN 1935  
 Assigned See Kob. J.E. 8857

