

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 7814.

Received at London Office

12 JUL 1932

Date of writing Report June 10<sup>th</sup> 1932 When handed in at Local Office 25 June 1932 Port of Kobe  
 No. in Survey held at Kobe Date, First Survey 8-7-31 Last Survey 2-6-32 19  
 Reg. Book. Number of Visits

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

(Nagasaki Yard No 501)

Tons { Gross  
Net

Built at Nagasaki By whom built Mitsubishi Dockyard Co Yard No. 501 When built 1932

Owners Messrs Osaka Shosen Kaisha Port belonging to Osaka

Oil Engines made at Nagasaki By whom made Mitsubishi Dockyard Co Contract No. 501 When made

Generators made at " By whom made " Contract No. " When made

No. of Sets 3 Engine Brake Horse Power 250 Nom. Horse Power as per Rule " Total Capacity of Generators 600 Kilowatts.

OIL ENGINES, &c.—Type of Engines Mitsubishi Vickers solid injection 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 46 kg/cm<sup>2</sup> Diameter of cylinders 400 mm Length of stroke 450 mm No. of cylinders 3 No. of cranks 3

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 456 mm Is there a bearing between each crank Yes

Revolutions per minute 340 Flywheel dia. 1700 mm Weight 5,080 Kg Means of ignition Compression Kind of fuel used Heavy Diesel oil

Crank Shaft, dia. of journals as per Rule 218 mm Crank pin dia. 235 mm Crank Webs Mid. length breadth 350 mm Thickness parallel to axis "

as fitted 235 mm as fitted 235 mm Mid. length thickness 123 mm Thickness around eyehole "

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 37.5 mm

as fitted as fitted as fitted as fitted

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 Water cooled

Cooling Water Pumps, No. 1 140 mm dia. 40 mm stroke Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size one 80 mm dia. 40 mm stroke connected to end of crank shaft

Air Compressors, No. Two sets (each 3240) No. of stages 3 Diameters 80 x 310 x 360 mm Stroke 180 mm Driven by Generator through magnetic clutch

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 Yes What means are provided for cleaning their inner surfaces "

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. Made at Nagasaki Total cubic capacity " Internal diameter " thickness "

Seamless, lap welded or riveted longitudinal joint " Material " Range of tensile strength " Working pressure by Rules "

ELECTRIC GENERATORS:—Type Multipole (Tested at Nagasaki Cut No 531)

Pressure of supply 225 volts. Load 890 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 To be tried on board

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 Crank shaft 8-9-31 Receivers " Separate Tanks "

(If not, state date of approval)

SHAFTING GEAR

List to be forwarded later.

The foregoing is a correct description,  
Kobe Shipyard & Engine Works, M. Z. K., LTD.,

K. Makino  
General Manager

Manufacturer.



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Foundation

006930-006941-0115

Dates of Survey while building { During progress of work in shops - July 8. Aug: 14-19-27-31. Sept. 7-11-29-30. Oct. 9-10-16-23-26-27-29-30-31. Nov. 2-4-7-10-11-24. Dec. 2-4-12-15-26. 1931  
 During erection on board vessel - - - - - Jan. 9-12. Feb. 22. Mar. 4-8-11-22-23-24. April. 2-4-15-16-20-21-30. May 6-19. 31-23-27-28 June 2<sup>nd</sup> 1932.  
 Total No. of visits 52.

Dates of Examination of principal parts—Cylinders 29-10-31 30-10-31 7-11-31 Covers 4-12-31 12-12-31 26-12-31 Pistons 2/11/31 30-31/10/31 Piston rods ✓

Connecting rods 2-11-31 & 7-11-31 Crank and Flywheel shaft 26-10-31 10-11-31 12-12-31 Intermediate shaft ✓

Crank and Flywheel shaft, Material A4 Steel Identification Mark R.N. 3117 3127 3122 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.)

The machinery herein described has been constructed under special survey in accordance with the requirements of the Rules & approved plans, the materials have been tested, found efficient & the workmanship throughout is good. They have been tried under full load, overload, & governor tests when connected to dynamometers & afterwards when connected to their respective generators, parallel running tests were also carried out & all found satisfactory.

These machines are eligible in my opinion to have 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 board ship N<sup>o</sup> 501. Having been stamped as follows.

ENG. N<sup>o</sup> 138  
 LLOYD'S N<sup>o</sup> 38  
 H.D.B. R.  
 28-5-32

ENG. N<sup>o</sup> 139  
 LLOYD'S N<sup>o</sup> 39  
 H.D.B. R.  
 28-5-32

ENG. N<sup>o</sup> 140  
 LLOYD'S N<sup>o</sup> 40  
 H.D.B. R.  
 28-5-32

To a word Nagasaki Rept.

1m. 7.26—Transfer.

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

The amount of Fee ... £ 975<sup>00</sup> : When applied for, 4<sup>th</sup> June 1932.  
 Travelling Expenses (if any) £ 80<sup>00</sup> : When received, 25<sup>th</sup> 6/1932.

H. B. Buchanan.  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 3 MAR 1933

Assigned

See Nag. 1869



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