

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 1760

Received at London Office

17 MAR 1954

writing Report 19 When handed in at Local Office FEB. 25 1954 19 Port of KOBE

Survey held at Tamano, Japan Date, First Survey 23rd January 1953 Last Survey 28th November 1953 Number of Visits

on the Single Screw vessel M.T. "OMUROSAN MARU" Tons Gross 1210.272 Net 777.317

Tamano, Japan By whom built Mitsui Shipbuilding Engineering Co., Ltd. Yard No. 573 When built Nov. 53 Mitsui Senpaku K. K. Port belonging to Tokyo

Engines made at Tamano, Japan By whom made Mitsui Shipbuilding Engineering Co., Ltd. Engine No. 496, 507 When made Nov. 53

Generators made at Tamano, Japan By whom made Mitsui Shipbuilding Engineering Co., Ltd. Generator No. 7006, 7007 When made Nov. 53

Sets 2 B.H.P. of each Set 165 M.N. of each Set as per Rule 41.25 Capacity of each Generator 110 Kilowatts

intended for essential services. yes

ENGINES, &c.—Type of Engines B & W DE 325 MTH 40 3 or 4 stroke cycle 4 Single or double acting Single

Mean pressure in cylinders 55 kg/cm<sup>2</sup> Diameter of cylinders 245 mm Length of stroke 400 mm No. of cylinders 3 No. of cranks 3

Indicated pressure 7.5 kg/cm<sup>2</sup> Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 315 mm

Are there a bearing between each crank yes Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 4732500 Revolutions per minute 460

Wheel dia. 1350 mm Weight 1774 kg Means of ignition Compression Kind of fuel used Diesel oil

Shaft, Solid forged as per Rule 149.61 mm Crank pin dia 170 mm Crank Webs Mid. length breadth 390 mm Thickness parallel to axis 84 mm Semi-built dia. of journals as fitted 170 mm Mid. length thickness 84 mm All built Thickness round eyebolt 85 mm

Wheel Shaft, diameter as per Rule Generator armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 957500

Means provided to prevent racing of the engine yes Means of lubrication Forced Kind of damper if fitted

Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

Working Water Pumps, No. and how driven 2, Independent Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Lubricating Oil Pumps, No. and size 1 Gear pump; Particulars of gear: Breadth 75 mm, Module 6, No. of teeth 31, RPM 460

Compressors, No. No. of stages Diameters Strokes Driven by

Engining Air Pumps or Blowers, No. How driven

RECEIVERS:—Have they been made under Survey yes State No. of Report or Certificate AR16687

(other than main engines) full details of safety devices 1 Spring loaded safety valve, Valve diam. 12 mm

Are the internal surfaces of the receivers be examined and cleaned yes

Are there a drain arrangement fitted at the lowest part of each receiver yes

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

Working Air Receivers, No. 1 Total cubic capacity 0.1 m<sup>3</sup> Internal diameter 420 mm thickness 11 mm

Seamless, lap welded or riveted longitudinal joint Welded Material O.H. Steel Range of tensile strength 46.4-52.1 kg/cm<sup>2</sup> Working pressure 2.5 kg/cm<sup>2</sup>

ELECTRIC GENERATORS:—Type Semi-enclosed, Drip proof, self ventilated, Open type

Voltage of supply 110 volts Full Load Current 1000 Amperes Direct or Alternating Current D.C.

Alternating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown

and off yes Generators, are they compounded as per Rule yes 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

Are the generators shielded that they cannot be accidentally earthed, short circuited, or touched yes Are the lubricating arrangements of the generators as per Rule yes

Are the generators under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements

Are the generators 100 kw. or over have they been built and tested under survey yes

Details of driven machinery other than generator NONE

ANS.—Are approved plans forwarded herewith for Shafting 17-8-53 Receivers 10-8-53 Separate Tanks 9-9-53

Are the Torsional Vibration characteristics if applicable been approved 17-8-53 21/8/53 Armature shaft Drawing No. 3D-4046

Are the spare gear required by the Rules been supplied yes

3 Exhaust valves, 3 Inlet valves, 1 Starting valves, 4 Fuel valves, 1 Safety valve, 9 sets piston rings

1 set crank pin bearings, 1 Gudgeon pin bush, 2 Fuel pumps, 6 sets Fuel pipes for one cylinder

The foregoing is a correct description—  
NEERING CO., LTD., TAMANO WORKS.

S. Tanaka  
Senior Managing Director.



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Dates of Survey while building  
During progress of work in shops - - 1953 - JAN. 23 FEB. 27 APR. 3 MAY 9. 22. 29 JUN. 5. 16. 20 JUL. 8. 22. 24. 27. 28. 29 AUG. 7  
During erection on board vessel - - 1953 - NOV. 13. 17. 25. 28  
Total No. of visits 23

Dates of Examination of principal parts - Cylinders 5-6-53 Covers - Pistons 28-7-53 Piston rods -

Connecting rods 28-7-53 Crank and Flywheel shafts 28-7-53 Intermediate shafts -

Crank shaft Material Journal: - D. H. Steel Arm - Elect. Furnace Steel Tensile strength JOURNAL 47.4 ~ 52.2 kg/cm<sup>2</sup> 45.6 ~ 48.0  
ENG. NO. 496 504  
Elongation JOURNAL 30 ~ 37% 35 ~ 37%  
ARM 29 ~ 35% 31 ~ 39%  
Identification Marks M-CK346 M-CK34  
MHB 28-7-53 MHB 28-7-53

Flywheel shaft, Material - Identification Marks -  
Identification marks on Air Receivers AR 504 LLOYD'S TEST KOB WP 25 K9 W.P. 41 K9 MHB 4-9-53

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 electric generator sets of this vessel have been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.

Materials and the workmanship are sound and good.

The electric generator sets have been examined under full working condition in the shop and comprehensive sea trials and found satisfactory.

The amount of Fee ... £ 758,000

When applied for FEB. 25. 1954 19

Travelling Expenses (if any) £ See Rpt.: 1

When received 19

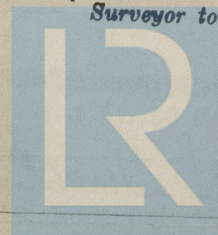
Committee's Minute

FRIDAY - 2 APR 1954

Assigned

See Rpt. 4 b.

Surveyor to Lloyd's Register of Shipping.



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