

Form 4C

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 291

20 APR 1954

Received at London Office

Date of writing Report 12 Dec 1953 When handed in at Local Office 19 Port of Kobe Shimonoseki

No. in Survey held at Nagasaki Date, First Survey 2nd April Last Survey 14th Nov 1953 Number of Visits 70

Single motor on the Twin Triple Screw/vessel "Victoria Maru" Tons Gross 7,620.32 Net 4,362.11

Built at Nagasaki By whom built Nagasaki Zosen Sho, Mitsubishi Zosen K.K. Yard No. 1437 When built 1953 11 mo

Owners Mitsubishi Kaifu K.K. Port belonging to Tokyo

Eng. Contract No. 264265266 When made 1953 8 mo

Generators made at Nagasaki By whom made Mitsubishi Electric Mfg Co. Nagasaki Contract No. 319954, 319955, 319956 When made 1953 8 mo

No. of Sets 3 Engine Brake Horse Power 3 x 350 v M.N. as per Rule Total Capacity of Generators 690 Kilowatts

Set intended for essential services Yes

OIL ENGINES, &c.—Type of Engines 5 UT 22/40 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 60 Kgs/cm² Diameter of cylinders 220 mm Length of stroke 400 mm No. of cylinders 5 No. of cranks 5

Mean indicated pressure 67 Kgs/cm² Firing order in cylinders 1-4-3-2-5 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 288.5 mm

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg-cm²) 5,475 Kg-cm² Revolutions per minute 375

Flywheel dia 1,450 mm Weight 1,555 Kgs Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 140 mm as fitted 150 mm Crank pin dia 150 mm Crank Webs Mid. length breadth 200 mm Mid. length thickness 82.5 mm Thickness parallel to axis Thickness round eyehole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Generat. armature, moment of inertia (16 m² or Kg-cm²) 1,516.64 Kg-cm²

Are means provided to prevent racing of the engine when declutched 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 Silencers - lagged

Cooling Water Pumps, No. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size one - 100 mm dia. x 60 mm stroke, single acting

Air Compressors, No. None No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. one - Roots blower Diameter of rotor 270 mm Stroke length of rotor 499.4 mm Driven by Each engine

AIR RECEIVERS:—Have they been made under Survey Yes State No. of Report or Certificate BR-10543

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 None

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 Shell 16 mm thickness End 22 mm

Starting Air Receivers, No. one Total cubic capacity 500 litres Internal diameter 69.6 mm thickness End 28-32 T/O Working pressure by Rules 30 Kgs/cm²

Seamless, lap welded or riveted longitudinal joint Riveted Material Boiler quality steel Range of tensile strength End 26-30 T/O Working pressure by Rules 30 Kgs/cm²

ELECTRIC GENERATORS:—Type Open drip proof

Pressure of supply 220 volts Full Load Current 1,000 Amperes Direct or Alternating Current DC

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

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

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

If the generators are 100 kw. or over have they been built and tested under survey Yes

Details of driven machinery other than generator Starting air compressors

PLANS.—Are approved plans forwarded herewith for Shafting Kob 21 July 1953 Receivers Kob 15 July 1953 Separate Tanks Kob 3 Aug 1953

Have Torsional Vibration characteristics if applicable been approved Kob 24 Nov 1953 Armature shaft Drawing No. C-33511

SPARE GEAR As per Rule and followings in addition:

3- Exhaust valves complete with valve casings and other fittings, 1- Starting valve on cylinder, 4 sets- Fuel valves of each size used

1- Cyl. relief valve complete, 4 sets- Piston rings, 3 sets- Carbon brushes for one generator.

The foregoing is a correct description,

L. Matsushita
NAGASAKI WORKS

Manufacturer.

MITSUBISHI SHIPBUILDING & ENGINEERING CO., LTD.



© 2021

Lloyd's Register Foundation

012888-012897-0200

Dates of Survey while building
 During progress of work in shops - } 1953 Apr. 1, 2, 4, 8, 27, 28, 30, May 6, 7, 9, 11, 12, 20, 30, June 2, 5, 8, 12, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 29, 30, July 1, 3, 4, 6, 8, 9, 10, 11, 12, 13, 15, 17, 21, 22, 24, 25, 28, Aug 1, 3, 8, 11, 13, 18, 22
 During erection on board vessel - } 1953 Sep 4, 7, 11, 18, 22, Oct 12, 14, 16, 19, 21, Nov 4, 7, 9, 11, 14
 Total No. of visits 70

Dates of Examination of principal parts—Cylinders 2.6.53, 12.6.53, 24.6.53 Covers 24.6.53, 24.6.53, 25.6.53 Pistons 16.6.53, 24.6.53, 4.7.53 Piston rods -

Connecting rods 8.6.53, 19.6.53, 1.7.53 Crank and Flywheel shafts 1.3.53, 25.5.53, 9.6.53 Intermediate shafts -

Crank shaft { Material Forged steel Tensile strength 32 T/2"
 Elongation 34% in 2 ins Identification Marks CH. No. 751004 PC. No. 203 LLOYD'S N.A.M. 10326 H.O.
 CH. No. 681020 PC. No. 204 LLOYD'S N.A.M. 10336 H.O.
 CH. No. 751004 PC. No. 202 LLOYD'S N.A.M. 10338 H.O.

Flywheel shaft, Material - Identification Marks -

Identification marks on Air Receivers M-21 No. AR-10, 543 LLOYD'S TEST 4.5 Kgs. W.P. 30 Kgs. Y.H. & 22.8.53

Is this machinery duplicate of a previous case Yes If so, state name of vessel ANATA-MARU, ARITA-MARU

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These machines have been constructed under Special Survey in accordance with the Rules, Approved plans and Secretary's letter.
 The material and workmanship are good.
 On completion, these machines have been examined under full working condition at shop and after installed in the vessel in accordance with the Rules and found satisfactory.

CC 5. 51 KOBE
 (The Surveyors are requested not to write below the space for Committee Minute.)

The amount of Fee ... £ 150.000
 Travelling Expenses (if any) £ See Rpt. 1
 When applied for APR - 7 1954
 When received LOCALLY 19

Shunichi Peter Mwanza Namara
 Surveyor to Lloyd's Register of Shipping

FRIDAY 21 MAY 1954

Committee's Minute
 Assigned See Rpt. 4e.

