

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 799

st. 4c.

Received at London Office
Kobe

Date of writing Report 1 March 1952

When handed in at Local Office

19

Port of

Kobe

Survey held at Aioi Japan.

Date, First Survey

30 - 4 - 1951

Last Survey

13 - 2 - 1952

Number of Visits 19

Book.

Single
on the Twin
Triple
Quadruple

Screw vessel

M/V "TAIEI - MARU"

Tons { Gross 11867.82
Net 8891.61

ilt at Aioi Japan.

THE HARIMA SHIPBUILDING & ENGINEERING CO., LTD.

467

When built Feb. 1952.

KYOEI TANKER K. K.

Port belonging to

Kobe

Engines made at Aioi Japan.

By whom made

THE HARIMA SHIPBUILDING & ENGINEERING CO., LTD.

Contract No. 112, 113

When made Nov. 1951.

Generators made at Tokyo Japan.

By whom made

TOKYO SHIBAURA ELECTRIC CO., LTD.

Contract No. 5110344

When made Oct. 1951.

of Sets

2

Engine Brake Horse Power

360

M.N. as per Rule

90 x 2

Total Capacity of Generators

480 Kilowatts.

Set intended for essential services Yes

OIL ENGINES, &c.—Type of Engines Solid injection trunk piston Diesel or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 56 Kg/cm² Diameter of cylinders 290 mm. Length of stroke 360 mm. No. of cylinders 5 No. of cranks 5

Mean indicated pressure 6.57 kg/cm² Firing order in cylinders 1-3-5-4-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 338 mm.

Is there a bearing between each crank Yes Moment of inertia of flywheel (kg-cm.²) 35100000 Revolutions per minute 500

Flywheel dia 1500 mm. Weight 2670 Kg Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule 159.894 mm. as fitted 200 mm. Crank pin dia 185 mm. Crank Webs Mid. length breadth 285 mm. Mid. length thickness 92 mm. Thickness parallel to axis - Thickness round eyehole -

Flywheel Shaft, diameter as per Rule - as fitted - Intermediate Shafts, diameter as per Rule - as fitted - General armature, moment of inertia (16 m² or Kg-cm.²) 6150000

Are means provided to prevent racing of the engine when detached 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 Yes

Cooling Water Pumps, No. One Centrifugal pump for each set Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size One gear pump for each set M=6 No. of Teeth = 10 Breadth of teeth = 90 mm. r.p.m. = 1120

Air Compressors, No. 2 No. of stages 2 Diameters 190; 190-170 mm. Stroke 150 mm. Driven by Electric Motor

Scavenging Air Pumps, No. - Diameter - Stroke - Driven by -

AIR RECEIVERS:—Have they been made under Survey Yes State No. of Report or Certificate M 5384

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 Peep hole

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 300 lit. Internal diameter 550 mm thickness 16 mm

Seamless, lap welded or riveted longitudinal joint Riveted Material O.H. Steel Range of tensile strength 29.9T/6 Working pressure by Rules 473.767 lb/in²

ELECTRIC GENERATORS:—Type Open drip proof

Pressure of supply 230 volts. Full Load Current 1043 Amperes. Direct or Alternating Current Direct Current

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 - and do the results comply with the requirements -

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

Details of driven machinery other than generator -

PLANS.—Are approved plans forwarded herewith for Shafting 19-10-51

(If not, state date of approval)

Receivers 8-8-51 Kobe

Separate Tanks 1-8-51

Have Torsional Vibration characteristics if applicable been approved 19-10-51

(state date of approval)

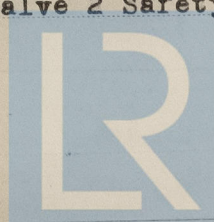
Armature shaft Drawing No. K 2161293

SPARE GEAR Cylinder liner 2 set, Piston ring (No.3-5)15 Piston ring (No.1-2)10 Upper oil scraper ring 2, Lower oil scraper ring 2. Main bearing brass 2. Bolt & Nut for main bearing 4, Bolt & nut for crank pin bearing 4, Exhaust valve (complete) 4. Fuel valve (complete) 4. Indicator valve 2 moving parts & spring for fuel pump 9 set. Fuel in injection pipe 10 set. Fuel body 1. Ball bearing for governor 2, All sorts of spring each 2. Cylinder cover (complete) 1 set piston (complete) 1 set. Fuel cam & Exhaust cam 1 set. piston pin 2 stud & nut for Cylinder cover 16 piston pin brass 2 crank pin Braring 2. Starting valve 2 suction valve 2 Safety valve 2 Nozzle with Needle for Fuel valve 5.

The foregoing is a correct description,

M. Yoshikawa
THE HARIMA SHIPBUILDING AND
ENGINEERING COMPANY, LTD.

Manufacturer.



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Foundation

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Dates of Survey while building { During progress of work in shops-- } 1951 April 30 June 9,22,29 July 13, Aug. 1,7,8,15,18,21,30 Sept. 6,15, Nov. 26
{ During erection on board vessel--- } 1952 Jan. 15, 24, Feb. 6, 13.
Total No. of visits 19

Dates of Examination of principal parts—Cylinders 15-8-51 Covers 18-8-51 Pistons 7-8-51 Piston rods -
Connecting rods 7 - 8 - 51 Crank and Flywheel shafts 1-8-51, 13-7-51 Intermediate shafts -
Crank shaft { Material O.H. steel Tensile strength 35.9-35.9 T/□" 36.3-36.3 T/□"
Elongation 29-30 % 30-30% Identification Marks K-OK 189; K-OK 211
(E.No.112) 113 (E.No.112) 113
Flywheel shaft, Material - Identification Marks -
Identification marks on Air Receivers No.AR 215 LLOYD'S TEST W.T.P. 45 Kg/cm2 W.P. 30 Kg/cm2 JN B 15-9-51

Is this machinery duplicate of a previous case Yes If so, state name of vessel M/V "NISSYO-MARU"

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

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

The workmanship and material are sound and good.

The Generators have been examined under working condition during comprehensive deck and sea trials and found satisfactory.

The amount of Fee... £ 90,000: When applied for 19
Travelling Expenses (if any) £ : : When received 19

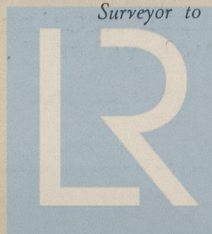
TUES. 12 AUG 1952

Committee's Minute

Assigned

See F.E. mch. rpt.

Shunji Hiroshima
Surveyor to Lloyd's Register of Shipping.



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