

Rpt. 4c.

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS,

No. 3253

1 JAN 1956

Date of writing Report 19 When handed in at Local Office DEC 29 1955 Port of Kobe  
 Received at London Office  
 No. in Survey held at Osaka & Aioi Date, First Survey 2-5-55 Last Survey 20-10-1955  
 Reg. Book. Number of Visits 5  
 on the <sup>Single</sup> ~~Twin~~ <sup>Triple</sup> ~~Quadruple~~ Screw vessel S.S. "JINGU MARU"  
 Built at AIOI JAPAN By whom built Harima S. B. & ENG. CO., LTD. Yard No. 495 When built Oct. 1955  
 Owners DAIKYO SEKIYU K.K. Port belonging to YOKKAICHI  
 Oil Engines made at OSAKA By whom made DAIHATSU KOGYO K.K. Engine No. 618125 When made July, 1955  
 Generators made at YOKOHAMA By whom made TOKYO SHIBAURA ELECTRIC CO., LTD. Generator No. 5517033 When made June, 1955  
 No. of Sets 1 B.H.P. of each Set 125 M.N. of each Set as per Rule 31.25 Capacity of each Generator 90 K.V.A. Kilowatts  
 Is Set intended for essential services

**OIL ENGINES, &c.** Type of Engines Vertical, 4 cycle, single acting, solid direct injection 2 or 4 stroke cycle 4 Single or double acting Single  
 Maximum pressure in cylinders 55 kg/cm<sup>2</sup> Diameter of cylinders 180 m/m Length of stroke 240 m/m No. of cylinders 6 No. of cranks 6  
 Mean indicated pressure 6.4 kg/cm<sup>2</sup> Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 239 m/m  
 Is there a bearing between each crank Yes { Moment of inertia of flywheel (1/6 m<sup>2</sup>/s<sup>2</sup> Kg.-cm.<sup>2</sup>) 231 kg-M<sup>2</sup> Revolutions per minute 600  
 Flywheel dia. 900 m/m Weight 480 kg Means of ignition compression Kind of fuel used Diesel oil  
 Crank Shaft, { Solid forged as per Rule as approved dia. of journals 130 m/m Crank pin dia 115 m/m Mid. length breadth 170 m/m Thickness parallel to axis -  
 { Semi-bull as fitted 130 m/m Crank Webs Mid. length thickness 60 m/m shrunk Thickness round eyehole -  
 Flywheel Shaft, diameter as per Rule - Generator armature, moment of inertia (1/6 m<sup>2</sup>/s<sup>2</sup> Kg.-cm.<sup>2</sup>) Generator 135 kg-M<sup>2</sup> Exciter 4 kg-M<sup>2</sup>  
 Are means provided to prevent racing of the engine - 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 Water cooled  
 Cooling Water Pumps, No. and how driven 1, attached gear pump Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes,  
 Lubricating Oil Pumps, No. and size 1-attached gear pump; Particulars of gear:- Module 4, No. of teeth 10, r.p.m. 705  
 Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

Scavenging Air Pumps or Blowers, No. - How driven -  
**AIR RECEIVERS:**—Have they been made under Survey Yes State No. of Report or Certificate AR - 23432  
 (other than main engines)  
 State full details of safety devices One (1) x 100 Escape valve  
 Can the internal surfaces of the receivers be examined and cleaned Yes  
 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  
 Starting Air Receivers, No. AR 621 Total cubic capacity 100 L (0.1M<sup>3</sup>) Internal diameter 332ø m/m Shell plate 9mm  
 thickness End plate 12mm  
 Seamless, lap welded or riveted longitudinal joint welded Material Steel plate Range of tensile strength 50.4-42.2 kg/mm<sup>2</sup> Working pressure 30kg/cm<sup>2</sup>

**ELECTRIC GENERATORS:**—Type  
 Pressure of supply 450 volts. Full Load Current 115.5 Amperes. Direct or Alternating Current A.C.  
 If alternating current system, state the periodicity 60 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 -  
 Details of driven machinery other than generator -

**PLANS:**—Are approved plans forwarded herewith for Shafting 6-5-55 Receivers 15-6-55 Separate Tanks 20-6-55  
 (If not, state date of approval) 21-7-55  
 Have Torsional Vibration characteristics if applicable been approved - Armature shaft Drawing No.  
 (State date of approval and name of previous duplicate case, if any)  
 Has the spare gear required by the Rules been supplied Yes

The foregoing is a correct description,

Director, Vice-Manager  
of Aioi Works.Manufacturer.  
DAIHATSU KOGYO K.K.

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Lloyd's Register  
Foundation

011619-011627-0089

Dates of Survey while building { During progress of work in shops - - } 1955-MAY 2, JUNE 6, JULY 12.  
{ During erection on board vessel - - - } 3-10-55, 20-10-55  
Total No. of visits

Dates of Examination of principal parts—Cylinders 6-6-55 Covers 6-6-55 Pistons 6-6-55 Piston rods -  
Connecting rods 6-6-55 Crank and ~~Flywheel~~ shafts 6-6-55 Intermediate shafts -  
Crank shaft { Material O.H. steel Tensile strength 59.8 kg/mm<sup>2</sup>  
Elongation 27 % Identification Marks LLOYD'S No. K-CK 456 YK LR 6-6-55  
Flywheel shaft, Material - Identification Marks -  
Identification marks on Air Receivers No. AR 621 KT LR 24-5-55

Is this machinery duplicate of a previous case Yes If so, state name of vessel M.V. "HIDE MARU"

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

The electric generator set has been constructed under Special Survey in accordance with the Rules, Approved plans, and Secretary's letters.

The Materials were found sound and free from defects and workmanship is good.

The electric generator set has been examined under full working condition during shop trial and comprehensive sea trial and found satisfactory.

C.E.R.D.

The amount of Fee ... ¥ 22,000 { When applied for 25/8 19 55-  
Travelling Expenses (if any) ¥ 1,150 { When received 19

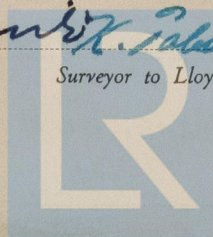
Committee's Minute

FRIDAY 13 APR 1956

Assigned

See Rpt. 4a

Surveyor to Lloyd's Register of Shipping.



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