

30 NOV 1953

4c.

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 1691

Writing Report 19 When handed in at Local Office 17. NOV. 1953 Port of Kobe  
 Survey held at Osaka & Aioi Date, First Survey 26th March Last Survey 22nd Aug 1953  
 on the ~~Port~~ Triple Quadruple Screw vessel steam tanker "DAIKYO MARU" Tons Gross 13,224.20 Net 9,553.47  
 at Aioi, Japan By whom built Harima Shipbuilding & Engineering Co. Ltd. Yard No. 479 When built Aug. 1953  
 Port belonging to Yokkaichi  
 Engines made at Osaka By whom made Daihatsu Kogyo K. K. Engine No. 618061 When made June 1953  
 Generators made at Tokyo By whom made Tokyo Shibaura Electric Co. Ltd. Generator No. 5354008 When made May 1953  
 Sets 1 B.H.P. of each Set 125 M.N. of each Set as per Rule 25 Capacity of each Generator 90 K.V.A.  
 intended for essential services No, harbour & emergency use.

ENGINES, &c. Type of Engines Solid injection, Daihatsu 6PS-18B 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 mm Length of stroke 240 mm No. of cylinders 6 No. of cranks 6  
 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) 239.5 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>) 2.31 x 10<sup>6</sup> Revolutions per minute 600  
 Wheel dia. 900 mm Weight 510 Kgs Means of ignition Compression Kind of fuel used Diesel oil  
 Crank Shaft, Solid forged dia. of journals as per Rule 104.8 mm Crank pin dia 115 mm Crank Webs Mid. length breadth 170 mm Thickness parallel to axis  
 Semi-built dia. of journals as fitted 130 mm Crank Webs Mid. length thickness 60 mm Thickness round eye hole  
 Wheel Shaft, diameter as per Rule Generator armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 1.57 x 10<sup>6</sup> 9.5 x 10<sup>5</sup>  
 as fitted (Rotor) (Exciter armature)

Means provided to prevent racing of the engine Yes Means of lubrication forced Kind of damper if fitted not fitted  
 Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material both  
 Suction Water Pumps, No. and how driven 1 x engine geared Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size 1 x 1.6 T/H gear pump, engine geared  
 Compressors, No. 1 No. of stages 2 Diameters 1 3/8" - 3 1/2" Stroke 3" Driven by SHP motor  
 Suctioning Air Pumps or Blowers, No. not fitted How driven

RECEIVERS: Have they been made under Survey Yes State No. of Report or Certificate AR 15089  
 (other than main engines)  
 Full details of safety devices 12 mm x 1 Ordinary Type  
 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  
 Unless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure  
 Suctioning Air Receivers, No. 1 Total cubic capacity 100 litre Internal diameter 332 mm thickness 9 mm  
 Unless, lap welded or riveted longitudinal joint Welded Material 2 H. steel Range of tensile strength 22,800 psi Working pressure 30 kg/cm<sup>2</sup>

ELECTRIC GENERATORS: Type Semi-enclosed, drip-proof  
 Voltage of supply 450 volts Full Load Current 115.5 Amperes Direct or Alternating Current 3 phase Alternating Current  
 Power factor 80 %  
 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 is an adjustable regulating resistance fitted in series with each shunt field  
 Are all terminals accessible, clearly marked, and furnished with sockets Yes Are they so spaced  
 Is it 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 Yes and do the results comply with the requirements Yes  
 Are the generators 100 kw. or over have they been built and tested under survey

Plans: Are approved plans forwarded herewith for Shafting 6-5-53 (Kobe) Receivers 17-2-53 Kobe Separate Tanks 14-4-53 Kobe  
 (If not, state date of approval)  
 Torsional Vibration characteristics if applicable been approved Yes 16-7-53 Armature shaft Drawing No. M1027487  
 (State date of approval and name of previous duplicate case, if any)  
 Is the spare gear required by the Rules been supplied Yes

The foregoing is a correct description,

I Takuma  
 for Daihatsu Kogyo K. K., Osaka

Manufacturer.

THE HARIMA SHIPBUILDING AND  
 ENGINEERING COMPANY, LTD.

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Dates of Survey while building { During progress of work in shops - - } 1953: March 26, May 6, 16, 19, June 1, 13, 15, ;  
Feb. 16, April 1, 10, 22, May 9.  
During erection on board vessel - - } 1953: July 21, 25, Aug. 19, 22  
Total No. of visits. 16

Dates of Examination of principal parts - Cylinders 6.5.53 Covers 6.5.53 Pistons 15.6.53 Piston rods -  
Connecting rods 16.5.53 Crank and Flywheel shafts 19.5.53 Intermediate shafts -

Crank shaft { Material Forged steel Tensile strength 54.9 Kgs/mm<sup>2</sup>  
Elongation 32% Identification Marks KW-CK 135 hi B 14-5-53

Flywheel shaft, Material - Identification Marks -

Identification marks on Air Receivers. NO. AR 490 LLOYD'S TEST W.T.P - 48.5 kg/cm<sup>2</sup> W.P - 30 kg/cm<sup>2</sup>  
JN LR 9-5-53

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 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 and comprehensive sea trial and found satisfactory.

The amount of Fee ... £ 423.000

When applied for 1-8 1953

Travelling Expenses (if any) £ :

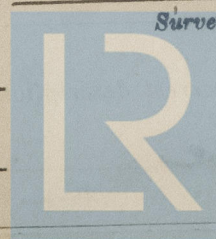
When received 19

Committee's Minute

Assigned

FRIDAY 15 JAN 1954

Surveyor to Lloyd's Register of Shipping.



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