

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Kob. No. 1536

No. 972

Date of writing Report 2-4-53 (Yokohama) 19 When handed in at Local Office 27. AUG. 1953 19 Received at London Office E9 SEP 1953

No. in Survey held at Shimizu & Aioi, Japan Date, First Survey 24-10-52 Last Survey 21-6-53 (Kobe) 19

Reg. Book. on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel S.T. "KOHO-MARU" Tons { Gross 17808.11 Net 13377.88

Built at Aioi, Japan By whom built HARIMA SHIPBUILDING WORKS Yard No. 477 When built July '53

Owners Iino Kaime K.K. Port belonging to Tokyo

Oil Engines made at Shimizu, Japan By whom made Ito Engineering Co., Ltd. Contract No. 4078 When made 3-53

Generators made at Himeji, Japan By whom made Tokai Shitaura Electric Co., Ltd. Contract No. S258176 When made 2-53

No. of Sets 1 Engine Brake Horse Power 120 M.N. as per Rule 24 Total Capacity of Generators 90 KVA Kilowatts

Is Set intended for essential services

OIL ENGINES, &c.—Type of Engines 4 SCSA Trunk Piston 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 55 kg/cm² Diameter of cylinders 185 mm Length of stroke 260 mm No. of cylinders 5 No. of cranks 5

Mean indicated pressure 5.45 kg/cm² Firing order in cylinders 1-2-4-5-3 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 230 mm

Is there a bearing between each crank yes Moment of inertia of flywheel (+6 m² or Kg.-cm.²) 6 x 10⁵ Revolutions per minute 600

Flywheel dia 860 mm Weight 453 kg Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule 102.6 mm as fitted 120 Crank pin dia 110 mm Crank Webs Mid. length breadth 160 mm shrunk Thickness parallel to axis - Mid. length thickness 60 Thickness round eyehole -

Flywheel Shaft, diameter as per Rule - as fitted - Intermediate Shafts, diameter as per Rule - as fitted - General armature, moment of inertia (+6 m² or Kg.-cm.²) 388 x 10⁵

Are means provided to prevent racing of the engine when declutched - Means of lubrication Forced Kind of damper if fitted No.

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

Cooling Water Pumps, No. 1 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 M4 PCD 48 mm Breadth 44 mm RPM 600

Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

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

AIR RECEIVERS:—Have they been made under Survey yes State No. of Report or Certificate AR-15308

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. 2 Total cubic capacity 200 l x 2 Internal diameter 500 mm thickness 12 mm

Seamless, lap welded or riveted longitudinal joint Fusion welded Material O.H. steel Range of tensile strength 33.2 T₆ Working pressure by Rules as approved

ELECTRIC GENERATORS:—Type Drip proof self ventilated 3 phase synchronous generator

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 - 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

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 18-12-52 (Kobe) Receivers Separate Tanks

(If not, state date of approval) Have Torsional Vibration characteristics if applicable been approved 8-12-52 (Kobe) for Gov. Armature shaft Drawing No. M 1027416

SPARE GEAR 2 cyl- piston rings, 1- piston pin bearing, 1- crank pin bearing, 1 main bearing, 1-cylinder liner

3- exhaust valves, 1- suction valves, 1- starting valve, 2- fuel injection valves, 4- fuel valve nozzle tips,

1- cylinder relief valve, 1- fuel oil pump, 1- lub. oil pump gear, 2- fuel injection pipes with union joint. etc.

The foregoing is a correct description;

Sho. Shiratori Manufacturer.

Ito, Engineering Co. L.T.D.

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

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