

4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 2121

3-JUN1954

Received at London Office

of writing Report 19 _____ When handed in at Local Office MAY 27 1954 19 _____ Port of Kobe

in Survey held at Tamano, Japan Date, First Survey 21st July, 1953 Last Survey 19th March, 1954

Book. Single on the Toku Triple Quadruple Screw vessel. m.v. "HAKONESAN MARU" Number of Visits 36

at Tamano, Japan By whom built Mitsui Shipbuilding & Engineering Yard No. 580 When built Mar. 1954

ers Mitsui Steamship Co., Ltd. Co., Ltd. Port belonging to Tokyo

Engines made at Tamano, Japan By whom made Mitsui Shipbuilding & Engineering Co., Ltd. Engine No. 506/508 When made Mar. 1954

erators made at Tokyo, Japan By whom made Shibaura Electric Co., Ltd. Generator No. 5355115/17 When made Mar. 1954

of Sets 3 B.H.P. of each Set 350 M.N. of each Set as per Rule 87.5 x 3 Capacity of each Generator 230 x 3 Kilowatts

et intended for essential services Yes

L ENGINES, &c.—Type of Engines Mitsui-B&W DE 725-MTH-40 3 or 4 stroke cycle 4 Single or double acting Single

imum pressure in cylinders 55 kg/cm² Diameter of cylinders 245 mm Length of stroke 400 mm No. of cylinders 7 No. of cranks 7

m indicated pressure 7.5 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 315 mm

here a bearing between each crank Yes Moment of inertia of flywheel (16,000 Kg.-cm.²) 4,748,000 Revolutions per minute 425

Manuf wheel dia. 1350 mm Weight 2730 kg. Means of ignition Compressor Kind of fuel used Diesel oil

nk Shaft, Solid forged dia. of journals as per Rule 154.42 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 290 mm Thickness parallel to axis 90 mm

as fitted 170 mm shrunk Mid. length thickness 90 mm Thickness round eye-holes 82.5 mm

wheel Shaft, diameter as per Rule Generator armature, moment of inertia (18,000 Kg.-cm.²) 1,674,330

means provided to prevent racing of the engine Yes Means of lubrication Forced Kind of damper if fitted -

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

oling Water Pumps, No. and how driven 2; Elec. motors Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

ricating Oil Pumps, No. and size 1-Gear pump per each engine. Particulars of gear: Breadth 75 mm, Module 6, No. of teeth 15, r.p.m. 425.

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

evenging Air Pumps or Blowers, No. - How driven -

R RECEIVERS:—Have they been made under Survey Yes State No. of Report or Certificate AR 19213

(other than main engines) te full details of safety devices One spring loaded safety valve

the internal surfaces of the receivers be examined and cleaned Yes

here a drain arrangement fitted at the lowest part of each receiver Yes

h Pressure Air Receivers, No. - Cubic capacity of each - Internal diameter - thickness -

ainless, lap welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure -

orting Air Receivers, No. 1 Total cubic capacity 0.1 m³ Internal diameter 420 mm thickness 11 mm

ainless, lap welded or riveted longitudinal joint Welded Material O.H. steel Range of tensile strength 46.6-52.8 kg/mm² Working pressure 25 kg/cm²

ELECTRIC GENERATORS:—Type D.C. compound winding self-ventilated drip-proof open type

essure of supply 225 volts. Full Load Current 1040 Amperes. Direct or Alternating Current Direct

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

and off Yes Generators, are they compounded as per Rule Yes is an adjustable regulating resistance fitted in series with each shunt field Yes

all terminals accessible, clearly marked, and furnished with sockets Yes Are they so spaced

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

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

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

ils of driven machinery other than generator None

ANS.—Are approved plans forwarded herewith for Shafting 2-9-53 Kobe Receivers 10-8-53 Separate Tanks 8-10-53

(If not, state date of approval) 1-10-53 Torsional Vibration characteristics if applicable been approved 12-10-53 Kobe Armature shaft Drawing No. 3D-3213

(State date of approval and name of previous duplicate case, if any)

the spare gear required by the Rules been supplied 11-Exhaust valves, 7-Air inlet valves, 2-Starting air valves,

D-Fuel valves, 2-Relief valves, 7 sets-Piston ring for one cylinder, 1-Crank pin bearing,

Gudgeon pin bushes, 3-Fuel pump complete, 21 sets-Fuel pipe for one cylinder, 1-Cylinder,

Pistons, 3-Indicator valves, 1 set-Main bearing.

MITSUI SHIPBUILDING & ENGINEERING CO., LTD., TAMANO WORKS.

The foregoing is a correct description,

S. Tanaka
Senior Managing Director Manufacturer.



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Lloyd's Register

011671-011677-0200

Dates of Survey while building
 During progress of work in shops - - 1953 Aug. 18, 21, 25, 28, Sept. 1, 4, 7, 8, 11, 15, 18, 22, Oct. 2, 14, 16, 22, 24, 30, Nov. 7, 10, 17, 20, 27, 30, Dec. 1, 3, 8, 11, 15, 18, 22, 26, 28.
 During erection on board vessel - - - 1954 Mar. 12, 24
 Total No. of visits 36

Dates of Examination of principal parts—Cylinders 22-12-53 Covers — Pistons 15-12-53 Piston rods —
 Connecting rods 15-12-53 Crank and Flywheel shafts 8-12-53 26-12-53 Intermediate shafts —
 Journal: Open hearth steel Eng. No. 506, 507, 508
 Material Arm: Electric furnace steel (cast steel) Tensile strength Journal: 49.2-49.8 49.2-49.8 49.2-49.8
 Crank shaft { Eng. No. 506, 507, 508 Identification Marks Eng. No. 506, 507
 Elongation Journal: 32-33% 31-33% 32-33% Arm: 46.2-50.8 46.3-49.9
 Flywheel shaft, Material — Identification Marks —
 Identification marks on Air Receivers No. AR 539 LLOYD'S TEST KOB W.T.P. 41kg/cm² W.P. 25kg/cm² JN LR 23-2-54

Is this machinery duplicate of a previous case. Yes If so, state name of vessel m.v. "HARUNASAN MARU"

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

The electric generator sets of this vessel have been constructed under Special Survey in accordance with the Rule, approved plans and Secretary's letters.
 The materials and workmanship are sound and good.
 The electric generator sets have been examined under full working condition during shop and comprehensive sea trial and found satisfactory.

25.6.54

RST

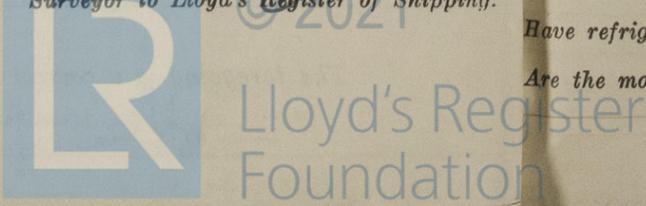
401,652-T. (MADE AND PRINTED IN ENGLAND)
 (The Surveyors are requested not to write on or below the space for Committee Minute.)

The amount of Fee ... £ 715,000.00 | When applied for MAY 27, 1954 19
 Travelling Expenses (if any) £ See Rpt. 1 | When received 19

FRIDAY 9 - JUL 1954

Committee's Minute
 Assigned See Rpt. 4e

A. Burns
 Surveyor to Lloyd's Register of Shipping.



Rpt. 13.
 Date of writing R...
 No. in Sur...
 gg. Book.
 on
 Built at...
 Owners...
 Installation fi...
 Is vessel equip...
 Plans, have the...
 Heating... 2
 Prime Movers,
 with a trip sw...
 Are the genera...
 Have machines...
 under 100 kw...
 built se...
 is the ventilat...
 damage from...
 room...
 are they in ac...
 steam and oil...
 material is it...
 per Rule...
 for each gener...
 reverse...
 and the switch...
 current...
 circuit...
 Are compartm...
 ammeters...
 protection dev...
 n series v...
 Switches, Circ...
 make of fuses...
 overload do th...
 devices operat...
 if otherwise th...
 under maximu...
 Are all the c...
 damage... Ye...
 type of cables...
 and laundries...
 steel tr...
 Are all lead sh...
 bulkheads prot...
 effectively bus...
 Have refriger...
 Are the motor...