

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 2327

Report No. 19 When handed in at Local Office OCT. - 8. 1954 19 19 Port of K O B E Received at London Office 19 OCT 1954
 Survey held at Aioi, Japan Date, First Survey 27-3-53 Last Survey 23-6-19 54
 Number of Visits 22
 on the ~~Triple~~ Single Screw vessel M/V "ISE-MARU" Tons Gross 13,220.70
 Net 9,350.81
 Aioi, Japan By whom built Harima Shipbuilding & Engineering Co., Ltd., Yard No. 481 When built July, 54
 Terukuni Kaibun K.K. Port belonging to Tokyo
 made at Aioi, Japan By whom made Harima Shipbuilding & Engineering Co., Ltd., Engine No. 120 When made July, 54
 made at Kawasaki, Japan By whom made Tokyo Shibaura Electric Co., Ltd., Generator No. 5311845 When made July, 54
2 B.H.P. of each Set 400 ✓ M.N. of each Set as per Rule 80 Capacity of each Generator 330KVA ~~XXXXXX~~
 led for essential services Yes

INES, &c.—Type of Engines Harima Sulzer 6 BH 29 2 or 4 stroke cycle 4 ✓ Single or double acting Single ✓
 Pressure in cylinders 56 kg/cm² Diameter of cylinders 290 mm ✓ Length of stroke 360mm ✓ No. of cylinders 6 ✓ No. of cranks 6
6.76 kg/cm² ✓ Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 338 mm ✓
 Distance between each crank Yes Moment of inertia of flywheel (~~10000~~ 2.55 x 10⁷ Kg.-cm.²) 450 ✓
1,500 mm Weight 1,700 kgs Means of ignition Compression Kind of fuel used Diesel Oil
 dia. of journals 200 mm ✓ Crank pin dia. 185 mm ✓ Crank Webs Mid. length breadth 285mm Thickness parallel to axis -
 as fitted 200 mm ✓ Mid. length thickness 92mm shrunk Thickness round eye-hole -
 shaft, diameter As per Rule Generator armature, moment of inertia (~~10000~~ 7.6 x 10⁶ Kg.-cm.²)
 provided to prevent racing of the engine Yes ✓ Means of lubrication Forced ✓ Kind of damper if fitted -
 cylinders fitted with safety valves Yes ✓ Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

ter Pumps, No. and how driven 1, F.W., Motor Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 Oil Pumps, No. and size one (1) gear pump for each set M-6 No of Teeth = 90 Breadth of Teeth 90 R.P.M. 1120
 ssors, No. 1 No. of stages 2 Diameters 80, 80 - 70 mm Stroke 70 mm Driven by Diesel Eng.
 Air Pumps or Blowers, No. - How driven -

REIVERS:—Have they been made under Survey Yes ✓ State No. of Report or Certificate AR 19666
 n main engines) 1 x 20 φ Ordinaly Type Yes ✓
 tails of safety devices Yes ✓
 nal surfaces of the receivers be examined and cleaned Yes ✓
 ain arrangement fitted at the lowest part of each receiver Yes ✓
 re Air Receivers, No. - Cubic capacity of each - Internal diameter - thickness -
 welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure -
 Receivers, No. 1 Total cubic capacity 300 liter Internal diameter 552 mm thickness 14 mm
 welded or riveted longitudinal joint Welded Material O.H. Steel Range of tensile strength 49.8kg/mm² Working pressure 30 kg/cm²

GENERATORS:—Type Self Ventilated Drip Proof Type
 apply 450 volts. Full Load Current 424 Amperes. Direct or Alternating Current Alternating Current
 current system, state the periodicity 60 Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown
6 Generators, are they compounded as per Rule Yes is an adjustable regulating resistance fitted in series with each shunt field Yes
 nals accessible, clearly marked, and furnished with sockets Yes Are they so spaced
 at they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes
 ors are under 100 kw. full load rating, have the makers supplied certificates of test - and do the results comply with the requirements -
 ors are 100 kw. or over have they been built and tested under survey Yes
 ven machinery other than generator -
 re approved plans forwarded herewith for Shafting 5-1-54 (KOBE) Receivers 4-11-53 (KOBE) Separate Tanks 30-3-54 (KOBE)
 (If not, state date of approval) 2-4-54 (LONDON) ✓ Armature shaft Drawing No. P-1070482
 l Vibration characteristics if applicable been approved (State date of approval and name of previous duplicate case, if any)
 gear required by the Rules been supplied Yes

The foregoing is a correct description,

M. Yoshizawa Manufacturer.
 THE HARIMA SHIPBUILDING AND ENGINEERING COMPANY, LTD.



008863-008870-0144

Dates of Survey while building
 During progress of work in shops -- 1953: - March 27, May 20, Aug. 17, Sept. 10, 15, Oct. 1, 7, 15, 31, Dec. 18, 25,
 1954: - Jan. 13, Feb. 25, April 7, 8,
 During erection on board vessel - - 1954: - May 18, 21, June 3, 4, 18, 21, 23,
 Total No. of visits 22

Dates of Examination of principal parts - Cylinders 13-1-54 Covers 25-12-53 Pistons 18-12-53 Piston rods -

Connecting rods 25-12-53 Crank and Flywheel shafts 27-3-53: 20-5-53 Intermediate shafts -

Crank shaft Material O.H. Steel Tensile strength 34.3T/sq.in : 35.9T/sq.in
 Elongation 30%: 29% Identification Marks K-OK 317: K-OK 328.

Flywheel shaft, Material - Identification Marks -

Identification marks on Air Receivers NO. AR 551 LLOYD'S TRUST W.T.P. 48.5kg/cm² W.P. 30kg/cm²
 KT LR 25-2-54

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 sets have been constructed under Special Survey in accordance with the Rules, 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 trials and found satisfactory.

4m.582.-T. (MADE AND PRINTED IN ENGLAND)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £7112,000 When applied for OCT. - 8. 1954 19

Travelling Expenses (if any) £ See Rpt. : 1. When received 19

R.R. Hartman & K. Salovey
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned See Rpt. 4c.



Rpt. 13
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