

ay 4.

Kobe: 2853

Rpt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. \_\_\_\_\_

28 JUN 1955

Received at London Office

KOBE, YOKOHAMA

Date of writing Report 19 \_\_\_\_\_ When handed in at Local Office JUN 20 1955 19 \_\_\_\_\_ Port of \_\_\_\_\_  
 No. in Survey held at Kobe & \_\_\_\_\_ Date, First Survey 10th February 55 Last Survey 4th May, 1955 (Kobe)  
 Reg. Book. \_\_\_\_\_ Number of Visits 22 - Kobe.

on the Single Screw vessel " NISSHUN MARU " Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_  
 { Triple  
 { Quadruple

Built at Shimizu By whom built Nippon Steel Tube Co., Ltd. Yard No. 120 When built \_\_\_\_\_  
 Shimizu Dockyard

Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
 Oil Engines made at Kobe By whom made Hanshin Diesel Works Ltd. Engine No. 5G-2804 1955 4mo.  
 5G-2805

Generators made at Kawasaki By whom made Fuji Denki Seizo K.K. Generator No. 214662A  
 214663A

No. of Sets 2 B.H.P. of each Set 100 each M.N. of each Set as per Rule 20 Capacity of each Generator 80 KVA Kilowatts

Is Set intended for essential services Yes

**OIL ENGINES, &c.**—Type of Engines 5G, Trunk piston solid injection Type of 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 58kg/cm<sup>2</sup> Diameter of cylinders 170mm Length of stroke 220mm No. of cylinders 5 No. of cranks 5

Mean indicated pressure 6.26 kg/cm<sup>2</sup> Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 200mm

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 3420000 kg/cm<sup>2</sup> 720  
 " " " balance wts. " " " 675000kg/cm<sup>2</sup> Revolutions per minute

Flywheel dia. 1,000mm Weight 493 kgs Means of ignition Solid Kind of fuel used Heavy Oil

Crank Shaft, { Solid forged as per Rule 97 dia. of journals 130 Crank pin dia. 105 Crank Webs Mid. length breadth 170 Thickness parallel to axis \_\_\_\_\_  
 { Semi-forged as fitted 130 Mid. length thickness 50 shrunk Thickness round eyelets \_\_\_\_\_  
 { All-built

Flywheel Shaft, diameter as per Rule \_\_\_\_\_ Generator armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) \_\_\_\_\_  
 as fitted \_\_\_\_\_

Are means provided to prevent racing of the engine Yes Means of lubrication Forced Lubrication 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 Yes

Cooling Water Pumps, No. and how driven pumps for 1 x dynamo engine driven centrifugal Is the sea suction provided with an efficient strainer which can be cleared within the vessel \_\_\_\_\_  
 each set

Lubricating Oil Pumps, No. and size 1 x Dynamo engine driven gear type each, capacity 1142 liters/hr. each.

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 \_\_\_\_\_ State No. of Report or Certificate \_\_\_\_\_  
 (other than main engines)

State full details of safety devices \_\_\_\_\_

Can the internal surfaces of the receivers be examined and cleaned \_\_\_\_\_

Is there a drain arrangement fitted at the lowest part of each receiver \_\_\_\_\_

Typhone use \_\_\_\_\_  
 High Pressure Air Receivers, No. 1 Cubic capacity of each 120 liters Internal diameter 340mm thickness 8mm

Seamless, lap welded or riveted longitudinal joint butt E.W. Material Steel plate Range of tensile strength 44kg/mm<sup>2</sup> Working pressure 9kg/cm<sup>2</sup>

Starting Air Receivers, No. 1 Total cubic capacity 120 litres Internal diameter 340mm thickness 10mm

Seamless, lap welded or riveted longitudinal joint butt E.W. Material Steel Plate Range of tensile strength 44.6kg/mm<sup>2</sup> Working pressure 30kg/cm<sup>2</sup>

**ELECTRIC GENERATORS:**—Type Semi Enclosed.

Pressure of supply 450 volts. Full Load Current 103 Amperes. Direct or Alternating Current Alternating

If alternating current system, state the periodicity 60 cycles 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 \_\_\_\_\_ and do the results comply with the requirements \_\_\_\_\_

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

Details of driven machinery other than generator No

**PLANS.**—Are approved plans forwarded herewith for Shafting approved 24-2-55 Receivers 24-2-1955 Separate Tanks \_\_\_\_\_  
 (If not, state date of approval) \_\_\_\_\_ Armature shaft Drawing No. MA 31644

Have Torsional Vibration characteristics if applicable been approved \_\_\_\_\_ (State date of approval and name of previous duplicate case, if any) \_\_\_\_\_

Has the spare gear required by the Rules been supplied Yes. 5 Exhaust Valves, 3 air inlet valves, 2 starting valves,  
 5 Fuel valves, cyl. safety valves, sets of piston ring, connecting rod bearing; 2 bottom end bearing  
 and 5 gudgeon pin bush, 2 Fuel pumps, 5 Fuel pipe, 1 cyl. liner, 1 cyl. cover, 1 piston, 1 connecting  
 rod, 1 set of coupling bolt, 3 sets of piston rings, for two sets.

The foregoing is a correct description,

*[Signature]*  
 Manufacturer.



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 Foundation

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Dates of Survey while building  
 During progress of work in shops - - 1955: Feb. 10, 14, 19, 24, 26 Mar. 2, 4, 9, 15, 22, 23, 24, 25, 26, 28, 29, 31 Apr. 9, 13, 14, 18 May 4.  
 During erection on board vessel - - - Apr. 9, 13, 14, 18 May 4  
 Total No. of visits 22. (Kobe)

Dates of Examination of principal parts - Cylinders 26-3-55 Covers 24-3-55 25-3-55 Pistons 23-3-55 Piston rods -

Connecting rods 22-3-55 Crank and Flywheel shafts 23-3-55 Intermediate shafts -

Crank shaft Material Forged Steel Tensile strength 36.6 ton/in<sup>2</sup> (5G-2804)  
 33.7 " (5G-2805)

Elongation 28.1% Identification Marks C.NO.3L631A LLOYD'S KOB YK 23-3-55 LR  
 29.1% C.NO.4L221A LLOYD'S KOB YK 23-3-55 LR

Flywheel shaft, Material - Identification Marks -

Identification marks on Air Receivers Starting use: AR619 LLOYD'S TEST KOB KWT 2616 WP 30KG, WTP 48.5KG MK LR 25-4-55  
 Typhone use: No. AR618 LLOYD'S TEST KOB WP 9KG, WTP 17KG KT LR 27-4-55

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.)

These Generator sets have been constructed under the supervision of the Society's Surveyors in accordance with the Rules, Approved Plans and Secretary's letters.

The workmanship and materials are sound and good.

These generator sets have been examined under full working condition in the shop trials and found satisfactory, and worthy to be classed to the Society with the Notation of  $\pm$  LMC with date when satisfactorily installed on board the ship.

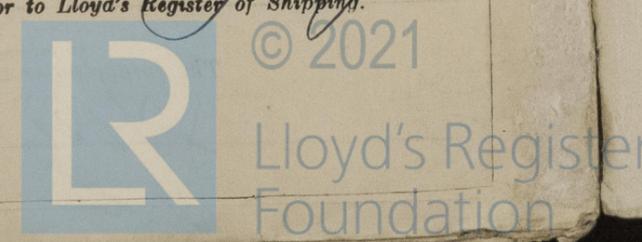
*(The Surveyors are requested not to write on or below the space for Committee's Minute.)*

The amount of Fee ... £ : : KOBG £40,000  
 Travelling Expenses (if any) £ : : KOBG  
 When applied for MAY 20 1955  
 When received 19

*(Signature)*  
 Surveyor to Lloyd's Register of Shipping.

FRIDAY 30 SEP 1955

Committee's Minute  
 Assigned See Rpt. 46



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 1955