

Kobe. 2853  
No. 17236

Rpt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Received at London Office 17 AUG 1955

Date of writing Report 30th July 1955 When handed in at Local Office 19 Port of Kobe and YOKOHAMA  
No. in Survey held at Kobe & Shimizu Date, First Survey 10th February 55 Last Survey 4th May, 1955 (Kobe)  
Reg. Book. on the Single Screw vessel M.V. "NISSHUN MARU" Number of Visits 22 - Kobe. Gross 9998.74 Tons Net 6235.42  
Built at Shimizu, Japan By whom built Nippon Steel Tube Co., Ltd. Yard No. 120 When built 7-55  
Owners Nissan Kisen K.K. Port belonging to Tokyo  
Oil Engines made at Kobe By whom made Hanshin Diesel Works Ltd. Engine No. 5G-2804 1955 4mo.  
Generators made at Kawasaki By whom made Fuji Denki Seizo K.K. Generator No. 214662A 214663A When made 4-55  
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 55G, Trunk piston solid injection Type 2 or 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> Revolutions per minute 720  
Flywheel dia. 1,000mm Weight 493 kgs Means of ignition Solid Kind of fuel used Diesel oil  
Crank Shaft, Solid forged dia. of journals 97 as per Rule 130 Crank pin dia. 105 Crank Webs Mid. length breadth 170 Thickness parallel to axis 50  
Flywheel Shaft, diameter as per Rule Generator armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 705000

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 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 yes State No. of Report or Certificate AR-22960 AR-22854  
(other than main engines)  
State full details of safety devices each receiver fitted with a safety valve as per Rule.  
Can the internal surfaces of the receivers be examined and cleaned yes  
Is there a drain arrangement fitted at the lowest part of each receiver yes  
Typhone use  
High Pressure Air Receivers, No. 1 Cubic capacity of each 120 litres 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 4-2-55  
(If not, state date of approval)  
Have Torsional Vibration characteristics if applicable been approved Armature shaft Drawing No. MA 31644  
(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,

Manufacturer.

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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 - - 1955: JUL. 5, 14, 21, 23  
Total No. of visits 22 (Kobe) 4 (Yokohama)

Dates of Examination of principal parts Cylinders 26-3-55 Covers 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)  
Elongation 28.1% Identification Marks C.NO.3L631A LLOYD'S KOB YK 23-3-55  
29.1% C.NO.4L221A LLOYD'S KOB YK 23-3-55

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 1 LMC with date when satisfactorily installed on board the ship.

Crank case explosion relief device fitted as per Rule in accordance with cir. NO. 2045.

These Generator sets have been satisfactorily installed in the vessel and tested under working condition.

It is submitted that these Generator sets of this vessel are eligible to be classed with this Society with the notation of + LMC 7.55.

4m.52.-T. (MADE AND PRINTED IN ENGLAND)  
(The Surveyors are requested not to write on or below the space for Committee Minutes.)  
Kobe ¥ 40,000 Kobe:  
The amount of Fee ... £ : : When applied for MAY 20 1955  
See 4b  
Travelling Expenses (if any) £ : : When received 19  
Committee's Minute. FRIDAY 30 SEP 1955  
Assigned See Rpt. 4b  
Surveyor to Lloyd's Register of Shipping.  
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