

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Received at London Office

Report 10th Sept. 1951 When handed in at Local Office 10th Sept. 1951 Port of Yokohama & KOBE

Survey held at Niigata and Aioi, Japan. Date, First Survey 22-1-51 Last Survey 10th October 1951 Number of Visits 14

on the <sup>Single</sup> Twin <sup>Triple</sup> Screw vessel Steam Ship "TONAN MARU" Tons { Gross 19320.38 Net 13211.40

OSAKA JAPAN By whom built OSAKA IRON WORKS, LTD. OSAKA Tonan Maru -Yard-No. When built 1938-10-20

Nihon Suisan K.K. Port belonging to Tokyo

made at Niigata, Japan By whom made Niigata Engineering Co., Ltd. Contract No. 8124 When made 51. 6 Mo.

made at Nagasaki, Japan By whom made Mitsubishi Electric Mfg. Co. Contract No. 317883 When made 51. 4 Mo.

1 sets. Engine Brake Horse Power 375 B.H.P. M.N. as per Rule 93.75 Total Capacity of Generators 200 Kilowatts.

d for essential services yes

GINES, &c.—Type of Engines Vertical trunk piston type 2 or 4 stroke cycle 4 cycle Single or double acting Single

Pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 310 mm. Length of stroke 420 mm. No. of cylinders 5 No. of cranks 5

ed 6.5 kg/cm<sup>2</sup> Firing order in cylinders 1-3-5-4-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 350 mm.

ce aring between each crank Yes Moment of inertia of flywheel (x6 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 5670 kg.-m<sup>2</sup> Revolutions per minute 400 R.P.M.

1600 mm. Weight 3280 kg Means of ignition Compression Kind of fuel used Diesel Gas oil

shaft, dia. of journals as per Rule 174.0 mm. as fitted 210 mm Crank pin dia 190 mm Crank Webs Mid. length breadth 290 mm. shrunk Thickness parallel to axis -

1 Shaft, diameter as per Rule - as fitted - Intermediate Shafts, diameter as per Rule - as fitted - General armature, moment of inertia (x6 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 394 kg.-m<sup>2</sup>

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

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

Water Pumps, No. 1 centrifugal pump for this eng. Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

ing Oil Pumps, No. and size 1 set of gear pump for this engine, and pump capacity is 7000 litres per hour Del.bore 50mm.

pressors, No. — No. of stages — Diameters — Stroke — Driven by —

ing Air Pumps, No. — Diameter — Stroke — Driven by —

ECEIVERS:—Have they been made under Survey — State No. of Report or Certificate —

ver, which can be isolated, fitted with a safety valve as per Rule —

rnal surfaces of the receivers be examined — What means are provided for cleaning their inner surfaces —

rain arrangement fitted at the lowest part of each receiver —

essure Air Receivers, No. — Cubic capacity of each — Internal diameter — thickness —

welded or riveted longitudinal joint — Material — Range of tensile strength — Working pressure by Rules —

Air Receivers, No. — Total cubic capacity — Internal diameter — thickness —

welded or riveted longitudinal joint — Material — Range of tensile strength — Working pressure by Rules —

TRIC GENERATORS:—Type Drip Proof Open type

e of supply 230 volts. Full Load Current 870 Amperes. Direct or Alternating Current Direct current

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

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

minals accessible, clearly marked, and furnished with sockets yes Are they so spaced

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

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

erators are 100 kw. or over have they been built and tested under survey yes

driven machinery other than generator —

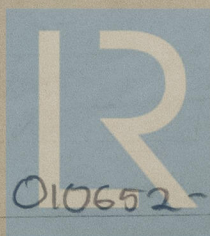
NS.—Are approved plans forwarded herewith for Shafting Date of approval = 3-5-51 Receivers 8-3-51 Separate Tanks -

rsional Vibration characteristics if applicable been approved Date of approval = 26-4-51 Armature shaft Drawing No. C 330440

RE GEAR To be included in 600 B.H.P. Engine (Seperate RPT). Please see RPT 4C-1 attached hereto

The foregoing is a correct description,

Yoshikawa M. Otsuki. Manufacturer.  
PRIMA SHIPBUILDING AND  
ENGINEERING COMPANY, LTD.



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Lloyd's Register  
Foundation

010652-010661-0215



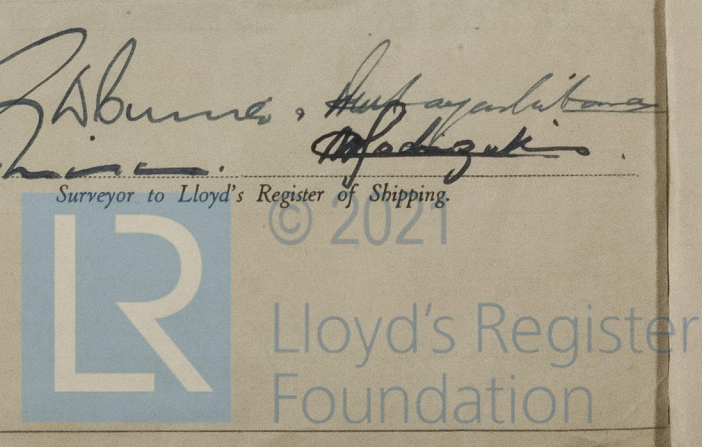
1951:-  
During progress of work in shops:- March .... 8,9,19 April .....2,3,13,26,27 June ..... 15,16.  
Dates of Survey while building During erection on board vessel:- 1251 Sept 13 24 29 Oct. 10  
Total No. of visits 14  
Dates of Examination of principal parts—Cylinders 26-4-51 Covers 26-4-51 Pistons 16-6-51 Piston rods -  
Materials Rough Turn Finish Materials Rough Turn Finish  
Connecting rods 9-3-51 3-4-51 13-4-51 Crank and Flywheel shafts 19-2-51 19-3-51 27-4-51 Intermediate shafts -  
Crank shaft { Material Forged Steel (SF50 ....According to J.E.S.) Tensile strength 33.1 (Top) 32.7 (Bottom)  
Elongation 33.0 (Top) 32.0 (Bottom) Identification Marks K-CK-174 KM B  
Flywheel shaft, Material - Identification Marks -  
Identification marks on Air Receivers

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.)

This engine has been constructed under the supervision of the Society's Surveyors in accordance with the Rules and approved plans.  
Material were found to be sound and free from defects and the workmanship is good.  
This Engine has been examined under full load working condition in the shop and found satisfactory.  
It is submitted that this machinery is eligible to be classed with this Society with notation of ~~BS\*~~ ~~BS\*~~ when satisfactory installed in the vessel.  
The machinery has now been satisfactorily installed on board and tested under full power.

The amount of Fee ... £ 237.037.50 : : When applied for 19  
Travelling Expenses (if any) £ : : When received 19  
Committee's Minute  
Assigned



CU 5, 51 KOBK  
(The Surveyors are requested not to write on or below the space for Committee Minute.)