Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 9821.

Received at London Office SEP 1953

Date of writing Report 12-9-1953. When handed in at Local Office 14-9-1953 Port of SINGAPORE

No. in Reg. Book. 20707 Survey held at Singapore Date, First Survey 18.8.53. Last Survey 8.9.1953.

Number of Visits 14

Single / Twin / Triple / Quadruple } Screw vessel "NASSAU" Tons { Gross. / Net.

Built at Rochester N.Y. By whom built Odenbach S.B. Co. Yard No. When built 1944

Owners Ned Nieuw Guinea Petroleum Maats. Port belonging to The Hague

Oil Engines made at Rochester By whom made Clark Bros Contract No. When made 1944

Generators made at Canton Ohio U.S.A. By whom made Hercules Motor Corporation Contract No. When made 1944

No. of Sets 2 Engine Brake Horse Power 76 M.N. as per Rule Total Capacity of Generators 120 Kilowatts.

Is Set intended for essential services Yes

OIL ENGINES, &c.—Type of Engines Hercules Diesel Trunk piston 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders / Diameter of cylinders 5 5/8 Length of stroke 6" No. of cylinders 6 No. of cranks 6

Mean indicated pressure / Firing order in cylinders 1.5.3.6.2.4 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5"

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) / Revolutions per minute 1200

Flywheel dia. 16" Weight See sketch over leaf. Means of ignition Compression Kind of fuel used Distillate

Crank Shaft, dia. of journals as per Rule / as fitted 4½" Crank pin dia. 3 5/16" Crank Webs Mid. length breadth / Mid. length thickness Substantial shrunk SOLID Thickness parallel to axis ✓ Thickness round eyehole /

Flywheel Shaft, diameter as per Rule ✓ as fitted ✓ **Intermediate Shafts**, diameter as per Rule ✓ as fitted ✓ General armature, moment of inertia (16 m² or Kg.-cm.²) Thickness not taken

Are means provided to prevent racing of the engine when declutched Governed Means of lubrication forced Kind of damper if fitted ✓

Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Yes

Cooling Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size One - gear type To be examined

Air Compressors, No. One No. of stages Diameters Stroke Driven by Clutch

Scavenging Air Pumps, No. Nil Diameter ✓ Stroke ✓ Driven by ✓

AIR RECEIVERS:—Have they been made under Survey Nil. State No. of Report or Certificate ✓

Is each receiver, which can be isolated, fitted with a safety valve as per Rule ✓

Can the internal surfaces of the receivers be examined ✓ What means are provided for cleaning their inner surfaces ✓

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

High Pressure Air Receivers, No. Nil Cubic capacity of each ✓ Internal diameter ✓ thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓

Starting Air Receivers, No. Nil Total cubic capacity ✓ Internal diameter ✓ thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓

ELECTRIC GENERATORS:—Type Electric Machinery Mfg. Co - 60KW - Totally enclosed

Pressure of supply 220 volts. **Full Load Current** 181 Amperes. **Direct or Alternating Current** Alternating

If alternating current system, state the periodicity 60 ~ 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 Yes is an adjustable regulating resistance fitted in series with each shunt field Exciter field has Shunt Regulator

Are all terminals accessible, clearly marked, and furnished with sockets Yes Are they so spaced and shielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes Minute

If the generators are under 100 kw. full load rating, have the makers supplied certificates of test No and do the results comply with the requirements ✓

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

Details of driven machinery other than generator ONE F.W. PUMP. - ONE S.W. PUMP. - ONE AIR COMPRESSOR

PLANS.—Are approved plans forwarded herewith for Shafting No (If not, state date of approval) Receivers No Separate Tanks ✓

Have Torsional Vibration characteristics if applicable been approved No (state date of approval) Armature shaft Drawing No. Not available

SPARE GEAR To be verified

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - | During erection on board vessel - - | Total No. of visits

Dates of Examination of principal parts—Cylinders .... Covers .... Pistons .... Piston rods ....

Connecting rods .... Crank and Flywheel shafts .... Intermediate shafts ....

Crank shaft { Material .... Tensile strength .... | Elongation .... Identification Marks ....

Flywheel shaft, Material .... Identification Marks ....

Identification marks on Air Receivers ....

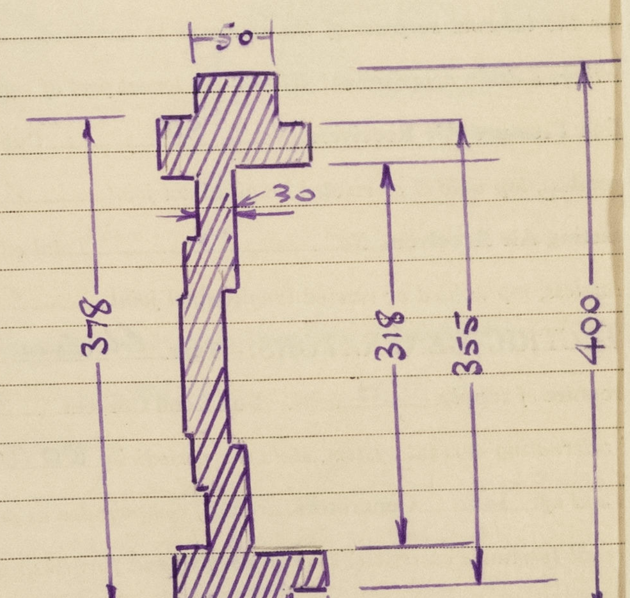
Is this machinery duplicate of a previous case .... If so, state name of vessel ....

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The two oil engine prime movers for the 60KW Generators have been examined under working conditions and the starboard unit opened and examined in its entirety.

The quality of the workmanship is good.

The port generator prime mover remains to be examined in its entirety.

The survey has been carried out in accordance with Rule requirements for vessels not built under survey & Secretary's letters and in my opinion the vessel will be eligible for notation LMC (with date) on completion of the survey.



AUX. ENGINE. FLYWHEEL
MILLIMETRE SIZES (APROX)

The amount of Fee ... ... £ : : | When applied for 19

Travelling Expenses (if any) £ : : | When received 19

R. J. Dunn
Surveyor to Lloyd's Register of Shipping.

TUESDAY 29 SEP 1953

Committee's Minute ....

Assigned See minute on Rule
fe. of

2m.8.47.—T. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee)