pt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 8647.

Received at London Office 17 SEP 1934 (KA No 5343)

Date of writing Report 12th August 1934 When handed in at Local Office 13/8/ 1934 Port of Yokohama (Kobe)

No. in Reg. Book. Survey held at Kobe & Yokohama Date, First Survey 3-10-1933. Last Survey 9th August 1934

Number of Visits 60

10264 on the Single / ~~Twin~~ / ~~Triple~~ / ~~Quadruple~~ Screw vessel M.V. "KANO MARU" Tons Gross 6940 Net 3785

Built at Uraga By whom built Uraga Dockyard. Yard No. 386 When built 1934-8

Owners K.K.K. Port belonging to Tokio

Oil Engines made at Kobe By whom made Mitsubishi Jukogyo K. Kobe Contract No. 472 / 473 / 474 When made 1933 / 1934

Generators made at Nagasaki By whom made Mitsubishi Denki K. Nagasaki Contract No. When made

No. of Sets Three Engine Brake Horse Power 290 Nom. Horse Power as per Rule Total Capacity of Generators 540 Kilowatts.

OIL ENGINES, &c.—Type of Engines M.R.B.6 Vertical trunk piston 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 46 Kg/cm² Diameter of cylinders 275 m/m Length of stroke 420 m/m No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 320 m/m Is there a bearing between each crank Yes

Revolutions per minute 300 Flywheel dia. 1700 m/m Weight 3100 Kg Means of ignition Compression Kind of fuel used Heavy diesel oil

Crank Shaft, dia. of journals as per Rule ..... as fitted 170 m/m ✓ Crank pin dia. 170 m/m ✓ Crank Webs Mid. length breadth 240 m/m Mid. length thickness 93 m/m shrunk Thickness parallel to axis ..... Thickness around eyehole .....

Flywheel Shaft, diameter as per Rule ..... as fitted 170 m/m ✓ **Intermediate Shafts**, diameter as per Rule ..... as fitted ..... Thickness of cylinder liners 26 m/m

Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced lubrication.

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

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

Lubricating Oil Pumps, No. and size One set ✓ 80 m/m dia × 45 m/m stroke 300 r.p.m.

Air Compressors, No. Two ✓ No. of stages Three Diameters HP 70 m/m MP 310-270 m/m LP 310-70 m/m Stroke 180 m/m Driven by One - Diesel eng. One - Motor.

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

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes ✓

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

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

High Pressure Air Receivers, No. ..... 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. One Total cubic capacity 550 litre Internal diameter 2'-5" ✓ thickness 5/8" ✓

Seamless, lap welded or riveted longitudinal joint T.R.B ✓ Material Steel Range of tensile strength 28-35 Tons/□" Working pressure by Rules 30 Kg/cm² ✓

ELECTRIC GENERATORS:—Type Multipole L.L type 180 K.W.

Pressure of supply 225 volts. **Load** 800 Amperes. **Direct or Alternating Current** D.C.

If alternating current system, state frequency of periods per second .....

Has the **Automatic Governor** been tested and found efficient when the whole load is suddenly thrown on or off Yes

Generators, do they comply with the requirements regarding rating Yes are they compound wound Yes

are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator .....

is an adjustable regulating resistance fitted in series with each shunt field Yes 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

PLANS. Are approved plans forwarded herewith for Shafting 19-10-33 Receivers 19-10-33 Separate Tanks 12/2/34
(If not, state date of approval)

SPARE GEAR Spare Gear, as per Spare Gear list received from Nagasaki Surveyors, checked on board and found in order (See separate list with Nagasaki rpt No 1976 dated 26/6/34)

The foregoing is a correct description,

T. Mase. Manufacturer.

W184-0191

Dates of Survey while building — During progress of work in shops: 1933 - Oct 3. 26, Nov 4. 6. 11. 20. 24. 28. 30, Dec 5. 7. 11. 14. 15. 20. 23. 26. 27. 1934 - Jan 10. 11. 12. 13. 16.

During erection on board vessel: 18. 19. Feb 1. 2. 3. 5. 17. 26. 27, March 5. 8. 14. 16. 20. 22. 23. 24. 26. 27.

Yokohama 11/9/33 12/2 7/3 13, 19, 24/4 16, 21, 28/5 8, 19, 22, 27/6 11, 13, 17, 28/7 9/8/34

Total No. of visits: 60.

Dates of Examination of principal parts—Cylinders: 27-12-33, 10-1-34, 12-1-34 — Covers: 18, 20-1-34, 5-2-34 — Pistons: 22-11-33, 16. 18-12-33. — Piston rods: ✓

Connecting rods: 12-1-34, 15-1-34, 2-2-34 — Crank and Flywheel shaft: 7-12-33, 22-12-33. — Intermediate shaft: ✓

Crank and Flywheel shaft, Material: Mild Steel — Identification Mark: R. No. 857 TK 22-12-33, 848 HDB 7-12-33, 874 HDB 13-1-34 — Intermediate shafts, Material: ✓ — Identification Marks: ✓

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 machinery herein described has been constructed under Special Survey in accordance with the Rules and approved plans. The materials and workmanship are good. The machinery has been tried on the test bed under full load, overload and governor tests when connected to their generators: parallel running tests were also carried out and all found satisfactory and eligible in my opinion for classification.

The machinery have been shipped to Uraga Dockyard where it is intended to install them on board ship No. 386.

Stamped as follows:-

Mach No. 472	Mach No. 473	Mach No. 474
LLOYDS	LLOYDS	LLOYDS
No. 5-9 R	No. 60 R	No. 61 R
KK 26-3-34	KK 24-3-34	KK 26-3-34

The machinery has been fitted on board this Vessel at Uraga in accordance with the Rules and approved plans. Materials and Workmanship good. On completion of fitting out, all tried under full working conditions with satisfactory results.

The machinery of this Vessel is eligible in my opinion to have the record of + L. M. C. 8. 34

G. H. Macdonald. Yokohama

The amount of Fee ... ... Yen 975.00 : When applied for, 6/6 1934

Travelling Expenses (if any) £ ✓ : When received, 2/7/1934

Committee's Minute TUES 23 OCT 1934

Assigned See Yka Apt 5343

T. Ishigami

Surveyor to Lloyd's Register of Shipping.

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

1m, 7, 28—Transfer.