Dates of Survey while building — During progress of work in shops: Feb. 8.15.22.26 March. 8.14.28 April. 8.22.26 May. 13.24. July. 6.27. Aug. 14 Sept. 6.12.19.25.27 Oct. 9.14.19.23.31 Nov. 11

During erection on board vessel: —

Total No. of visits: 26 partial = 10 full.

Dates of Examination of principal parts—Cylinders: Feb. 15.22.26 Apr. 8.26 May 13. Sept 12. Covers: Feb. 8. Apr. 8.22. May. 20. Jul. 6. Sept. 3-25 Pistons: Apr. 8. Oct 9. Piston rods: ✓

Connecting rods: Feb. 8 Apr. 8. Crank and Flywheel shaft: July 27. Aug. 12. Oct. 14. Intermediate shaft: ✓

Crank and Flywheel shaft, Material: Steel Identification Mark: SEE BELOW Intermediate shafts, Material: Identification Marks:

Is this machinery duplicate of a previous case: Yes. If so, state name of vessel: "Karamea"

General Remarks (State quality of workmanship, opinions as to class, &c.)

Crank Shafts' Identification Marks :-

Eng A. 12501 B.O.T. P.M. LLOYDS 1476 J.R. 14-3-29 (LR) 27-7-29

Eng. B. 589 LLOYDS 1591 R.W.F. 9-4-29 JR WW B.O.T. 589 (LR) 14-8-29.

Eng C. LLOYDS 1482 J.F.C. 10-4-29 P.M. B.O.T. PM WW 1482 10-4-29 (LR) 14-8-29.

Eng D. 1512 LLOYDS 1512 J.F.C. 13-5-29 (LR) 14-10-29.

Spare Shaft.

LLOYDS 1536 JFC 17-6-29 (LR) 14-10-29

B.O.T. PM 1536 17-6-29.

This Machinery has been constructed under Special Survey in accordance with approved plans & Rule Requirements. The workmanship and material, so far as can be seen, are good and satisfactory. Bench trials have been carried out under survey. The four sets which are numbered 12501/A/B/C/D have been despatched to Glasgow where they are to be installed on board and, in my opinion, will be eligible for inclusion in the Classification and record of ✠ L.R.C. of the vessel.

The amount of Fee ... ... £52-16-0 When applied for. 19 NOV 1929 19

Travelling Expenses (if any) £14-7-4 When received. 11/12/29 19 per London Ltr.

Committee's Minute GLASGOW 17 JUN 1930

Assigned See Gls. Rpt. No. 50560. WJM.

Surveyor to Lloyd's Register of Shipping.

1m,7,30—Transfer.

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

LR-FAF-TB13-17

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Rpt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 94494

19 NOV 1929 — Date of writing Report — 19 — When handed in at Local Office 19 NOV 1929 — 19 — Received at London Office 19 NOV 1929 — 18 JUN 1930

Port of London

No. in Reg. Book. — Survey held at Bedford — Date, First Survey 8th February 1929. Last Survey 11th November 1929

Number of Visits

on the ~~Single~~ Twin ~~Triple~~ ~~Quadruple~~ Screw vessel "EMPRESS OF JAPAN" Tons { Gross / Net

Built at Glasgow — By whom built Fairfield Shpg. & Eng. Co. — Yard No. — When built

Owners Canadian Pacific Rly Co. — Port belonging to London

Oil Engines made at Bedford — By whom made Messrs W. H. Allen Sons & Co. — Contract No 12501/1 to 4 — When made 1929

Generators made at Bedford — By whom made Messrs W. H. Allen Sons & Co. — Contract No 12504/1/2/3/4 — When made 1929

No. of Sets 4 — Engine Brake Horse Power 462 EACH 1848 TOTAL — Nom. Horse Power as per Rule 528 — Total Capacity of Generators 1232 Kilowatts.

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OIL ENGINES, &c.—Type of Engines Diesel (Burmeister Wain) — 2 or 4 stroke cycle 4 — Single or double acting S.A.

Maximum pressure in cylinders 560 lbs/□" — Diameter of cylinders 350 m/m — Length of stroke 470 m/m — No. of cylinders 6 — No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 420 m/m — Is there a bearing between each crank Yes

Revolutions per minute 350 — Flywheel dia. 1800 m/m — Weight 9162 lbs. — Means of ignition Compression — Kind of fuel used Diesel

**Crank Shaft,** dia. of journals as per Rule 190 m/m / as fitted 210 m/m — Crank pin dia. 210 m/m — Crank Webs Mid. length breadth 310 m/m / Mid. length thickness 105 m/m — Thickness parallel to axis of trunk SOLID FORGED — Thickness around eyehole

**Flywheel Shaft,** diameter as per Rule / as fitted CRANK SHAFT — **Intermediate Shafts,** diameter as per Rule ✓ / as fitted — Thickness of cylinder liners 28 m/m

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

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

**Cooling Water Pumps,** No. 2 per Engine — Is the sea suction provided with an efficient strainer which can be cleared within the vessel

**Lubricating Oil Pumps,** No. and size One per Engine, driven by Engine

**Air Compressors,** No. One per Engine — No. of stages 3 — Diameter 292x260x57 m/m — Stroke 214 m/m — Driven by Crank Shaft.

**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 Fusible plug

Can the internal surfaces of the receivers be examined Yes — What means are provided for cleaning their inner surfaces Ends portable

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

**High Pressure Air Receivers,** No. One per Engine — Cubic capacity of each 90 litres — Internal diameter 9 3/4" — thickness 3/8"

Seamless, lap welded or riveted longitudinal joint Seamless — Material Steel — Range of tensile strength 29/33 T/□" — Working pressure by Rules 1026 lbs/□"

**Starting Air Receivers,** No. One per Engine — Total cubic capacity 150 litres — Internal diameter 12" — thickness 1/2"

Seamless, lap welded or riveted longitudinal joint Seamless — Material Steel — Range of tensile strength 29/33 T/□" — Working pressure by Rules 1168 lbs/□"

ELECTRIC GENERATORS:—Type Open, drip proof. Multiple with I.P.

Pressure of supply 225 volts. **Load** 1370 Amperes. **Direct or Alternating Current** Direct

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

If they over compounded 5 per cent. level compounding, 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 Approved 27-6-29 (If not, state date of approval) — Receivers ✓ — Separate Tanks ✓

GEAR

As per attached List. W/3791 Set. List 4.

The foregoing is a correct description,

W. H. ALLEN, SONS & CO., LTD., R Arthur. Manufacturer.

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