

FEB 14 1938

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 20376

Date of writing Report 7.12.37 When handed in at Local Office 7.12.37 Port of Leith  
 No. in Survey held at Leith Date, First Survey 11.6.37 Last Survey 6.12.1937  
 Reg. Book. Number of Visits 24

on the Single Screw vessel "KAHIKA" Tons 245  
 Built at Leith By whom built Henry Robt & Sons Yard No. 245 E When built  
 Owners Union Steamship Co of New Zealand Port belonging to Melbourne  
 Oil Engines made at Leith By whom made Ruston & Hornsby Ltd Contract No. 186125 When made 1937  
 Generators made at Sunderland By whom made the Sunderland Forge & Engineering Co Contract No. F5392A When made 1937  
 No. of Sets 3 Engine Brake Horse Power 90 each Nom. Horse Power as per Rule 18.6 each Total Capacity of Generators 180 Kilowatts.

**OIL ENGINES, &c.**—Type of Engines 3 YCRZ Centrifugal Injection Cold Starting 2 or 4 stroke cycle 4 Single or double acting Single  
 Maximum pressure in cylinders 400 Diameter of cylinders 8" Length of stroke 10 3/4" No. of cylinders 3 No. of cranks 3  
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 9 1/8" Is there a bearing between each crank Yes  
 Revolutions per minute 600 Flywheel dia. 3' 4" Weight 19 tons Means of ignition Compression Kind of fuel used Heavy Oil  
 Crank Shaft, dia. of journals as per Rule Approved Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 8" Thickness parallel to axis shrunk  
 as fitted 6" Mid. length thickness 2 1/2" Thickness around eyehole shrunk  
 Flywheel Shaft, diameter as per Rule Approved Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 3/4"  
 as fitted 6" as fitted shrunk  
 Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Lanced  
 Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Water  
 Cooling Water Pumps, No. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
 Lubricating Oil Pumps, No. and size One, geared  
 Air Compressors, No. Yes No. of stages Yes Diameters Yes Stroke Yes Driven by Yes  
 Scavenging Air Pumps, No. Yes Diameter Yes Stroke Yes Driven by Yes

**AIR RECEIVERS:**—Have they been made under Survey Yes State No. of Report or Certificate Yes  
 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 Removal of fittings  
 Is there a drain arrangement fitted at the lowest part of each receiver Yes  
 High Pressure Air Receivers, No. Yes Cubic capacity of each Yes Internal diameter Yes thickness Yes  
 Seamless, lap welded or riveted longitudinal joint Yes Material Yes Range of tensile strength Yes Working pressure by Rules Yes  
 Starting Air Receivers, No. One Total cubic capacity 5 cub. ft. Internal diameter 1' 6" thickness 5/16"  
 Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 26/30 tons Working pressure by Rules Approved

**ELECTRIC GENERATORS:**—Type Open  
 Pressure of supply 220 volts. Full Load Current 272 Amperes. Direct or Alternating Current Direct  
 If alternating current system, state the periodicity Yes Has the Automatic Governor been tested and found efficient when the whole 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 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 Yes and do the results comply with the requirements Yes  
 If the generators are 100 kw. or over have they been built and tested under survey Yes

PLANS. Are approved plans forwarded herewith for Shafting 11.11.32 Receivers 7.11.34 Separate Tanks Yes

SPARE GEAR As per Rule requirements

**Ruston & Hornsby, Limited**  
 The foregoing is a correct description,

*J. Boyd*  
 Manager

Manufacturer.



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