

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 6.12.37
 Reg. Book. Number of Visits 24

on the Single Twin Triple Quadruple Screw vessel KAHIKA Tons 18612.5
 Built at Leith By whom built Henry Robt & Sons Yard No. 245 E When built 18612.5
 Owners Union Steamship Co of New Zealand Port belonging to Melbourne
 Oil Engines made at Leith By whom made Ruston & Hornsby Ltd Contract No. 18612.5 When made 1937
 Generators made at Sunderland By whom made The Sunderland Forge & Engineering Co Ltd 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 Curless 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 6" 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 6" Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 3/4"
 as fitted 6" Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication Forced
 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,

S. Royce

Manufacturer.

Ruston & Hornsby, Limited



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Lloyd's Register
 Foundation

FEB 11 1938

Dates of Survey while building
 During progress of work in shops
 During erection on board vessel
 Total No. of visits 24

Dates of Examination of principal parts—Cylinders 12-11-37 17-11-37 25-11-37 Covers 12-11-37 17-11-37 25-11-37 Pistons 12-11-37 17-11-37 25-11-37 Piston rods 12-11-37 17-11-37 25-11-37

Connecting rods 22-7-37 Crank and Flywheel shafts 9-9-37 20-9-37 12-10-37 Intermediate shafts 12-11-37 17-11-37 25-11-37

Crank and Flywheel shafts, Material Steel Identification Marks LLOYDS TEST 600 LBS WP 300 LBS 23-9-37 AS Nº 6692

Intermediate shafts, Material Steel Identification Marks LLOYDS TEST 600 LBS WP 300 LBS 23-9-37 AS Nº 6692

Identification marks on Air Receivers LLOYDS TEST 600 LBS WP 300 LBS 23-9-37 AS Nº 6692

Is this machinery duplicate of a previous case Yes If so, state name of vessel Mr. Wilm. Ferguson Gm Rpt 20302

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

These engines have been built under special survey in accordance with the Rules and approved plans.

The workmanship and materials are good.

Running tests have been carried out at the Mahari works with satisfactory results.

The engines have been despatched to Lith to the order of Messrs. Henry Robt & Son, for fitting on board the Motor Vessel "KAHIKA".

0/3800/P/11.89423/4 - 34/11.1008/9
 4203/11.8962 - 34/11.1010
 Two Request forms attached
 The amount of Fee ... y... be charged
 Travelling Expenses (if any) ... account
 When applied for, 19...
 When received, 19...
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 18 FEB 1938

Assigned See Rm 19509