

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 21239

Received at London Office

AUG 15 1940

Date of writing Report 9. 8. 40 When handed in at Local Office 9. 8. 40 Port of *Grimsby*

No. in Survey held at Reg. Book. 40402 on the *Motor* *Underwood*

Date, First Survey 2-9-37 Last Survey 1. 8. 1940 Number of Visits 15

Tons { Gross 1990 Net 1359

Single Motor *Underwood*
Twin Screw vessel
Triple
Quadruple

Built at *Leith* By whom built *Henry Robt. Ltd* Yard No. *291* When built *1941*

Owners *Union Steamship Co of New Zealand* Port belonging to *London*

Oil Engines made at *Lincoln* By whom made *Ruston & Hornsby, Ltd* Engine Contract No. *204211* When made *1940*

Generators made at *Horwich* By whom made *Laurence, Scott & Electromotors, Ltd* Generator Contract No. *80431* When made *1940*

No. of Sets *Two* Engine Brake Horse Power *150 each* Nom. Horse Power as per Rule *42.85* Total Capacity of Generators *200* Kilowatts.

OIL ENGINES, &c.—Type of Engines *5 VCRZ - Vertical Solid Injection* 2 or 4 stroke cycle *4* Single or double acting *Single*

Maximum pressure in cylinders *700 lbs.* Diameter of cylinders *8"* Length of stroke *10 3/4"* No. of cylinders *5* No. of cranks *5*

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 *17 1/2 Tons* Means of ignition *Compression* Kind of fuel used *Heavy oil*

Crank Shaft, dia. of journals as per Rule *Approved* as fitted *6"* Crank pin dia. *4 3/4"* Crank Webs Mid. length breadth *8"* Thickness parallel to axis *shrunk* Mid. length thickness *2 1/2"* Thickness around eyehole *shrunk*

Flywheel Shaft, diameter as per Rule *Approved* as fitted *6"* Intermediate Shafts, diameter as per Rule *shrunk* as fitted *shrunk* Thickness of cylinder liners *3/4"*

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 *Yes*

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 *Yes*

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. *Yes* Total cubic capacity *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*

ELECTRIC GENERATORS:—Type *Open*

Pressure of supply *220* volts. Full Load Current *455* 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 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*

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 *Yes* Separate Tanks *Yes*

SPARE GEAR

As per Rule requirements.

Ruston & Hornsby Limited,

The foregoing is a correct description.

E. Coysh

Manufacturer.

Oil & Gas Engines Dept.



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Lloyd's Register Foundation

W266-0182

Dates of Survey while building
 During progress of work in shops - 1937 Sep 2 Oct 28 1938 Nov 17 21 1939 Jan 26 Sep 21 1940 Jan 25 26 Apr 4 8 11 May 6 July 1 15 Aug 1
 During erection on board vessel - - - 15
 Total No. of visits

Dates of Examination of principal parts - Cylinders 1-7-40, 1-8-40 Covers 1-7-40, 1-8-40 Pistons 1-7-40, 1-8-40 Piston rods
 Connecting rods 25-1-40, 26-1-39 Crank and Flywheel shafts 8-4-40, 11-4-40 Intermediate shafts LLOYDS-3352-8-4-40 AS.
 Crank and Flywheel shafts, Material Steel Identification Marks LLOYDS-3374-11-4-40 AS.
 Intermediate shafts, Material ✓ Housing Identification Marks LLOYDS 3494-11-4-40.
 Identification marks on Air Receivers ✓ LLOYDS 3495-6-5-40.

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *Gen. Rpt. No. 20590.*

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 Makers works with satisfactory results.
 The sets have been despatched to Messrs Henry Robt. Ltd. Leith, for fitting on board the vessel.*

Request form attached
 9/2557/T/39/13/73-4. P/13/14075/6

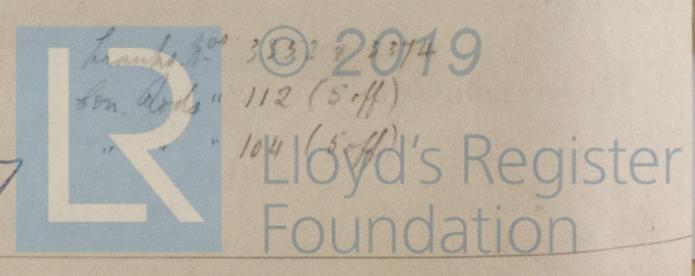
The amount of Fee of Gen	£ 17 : 17/6 :	When applied for,	9/8/1940
(578) less 2/6 for Survey		When received,	10/12/1940
of C.R.s 112/500			
Travelling Expenses (if any) £			
(of 3352, 3374, & R 104)			
(no allowance)			

Quellie
 Surveyor to Lloyd's Register of Shipping.

FRI. 11 JUL 1941

Committee's Minute
 Assigned

See Lth. J.C. 20437



Im. 11. 37. - Transfer. (M.A.B.E. IN IRELAND.)
 (The Surveyors are requested not to write on or below the space for Committee Minute.)