

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

See also Lth. Rpt. No. 20 438.

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.

Date, First Survey 2-9-37 Last Survey 1. 8. 1940

Number of Visits 15

No. 40402 on the Single Motor "Underwood" Triple Screw vessel

Tons { Gross 1990 Net 1359

Built at Leith By whom built Henry Robb, 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 No. 204211 When made 1940

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

No. of Sets 2 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 Cwt. 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 8" as fitted 6" Mid. length thickness 2 1/2" Thickness around eyehole 3"

Flywheel Shaft, diameter as per Rule Approved 6" Intermediate Shafts, diameter as per Rule 6" 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

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

Lubricating Oil Pumps, No. and size One, geared.

Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. Diameter Stroke Driven by

AIR RECEIVERS:—Have they been made under Survey State No. of Report or Certificate

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

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

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

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. Total cubic capacity Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

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 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 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 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. Separate Tanks

(If not, state date of approval)

SPARE GEAR

As per Rule requirements.

The foregoing is a correct description.

Ruston & Hornsby Limited,

E. Coyle

Manufacturer.

Oil & Gas Engines Dept.



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W266-0182

Dates of Survey while building { During progress of work in shops - - } 1937 Sep 2 Oct 28 1938 Nov 17. 24 1939 Jan 16 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.
LLOYDS 3495 - 6.5.40.

Identification marks on Air Receivers ✓

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *Grus. 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. Lth. for fitting on board the vessel.

Request form attached

72557/1/39/13/73-4. P/13/14075/6

The amount of Fee of 9.00 £ 17 : 17/6 :

(578) less 2/6 for Survey
7 C.R. 112/577
Travelling Expenses (if any) £
(C/S 3352, 3374, 9R 104)
no allowance

When applied for,
9/8/1940

When received,
10/12/1940

W. A. M. L. L.

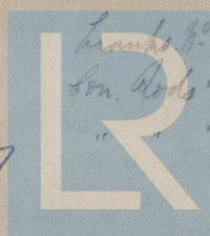
Surveyor to Lloyd's Register of Shipping.

FRI. 11 JUL 1941

Committee's Minute

Assigned

See Lth. J.C. 20437



353 2 3374

112 (5.0ff)

104 (5.0ff)

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