

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 21123

Received at London Office 16 NOV 1939

Date of writing Report 15. 11. 39 When handed in at Local Office 15. 11. 39 Port of Grimsby  
Date, First Survey 14. 11. 38 Last Survey 13. 11. 39  
Number of Visits 18

on the Single Screw vessel  
Twin Triple Quadruple  
Tw Se Turb. Lancashire Tons Gross Net

built at Greenock By whom built Greenock Dockyard Co. Ltd Yard No. 437 When built 1940

Port belonging to  
Engines made at Lincoln By whom made Ruston & Hornsby Ltd Contract No. 197614 When made 1939

Generators made at Manchester By whom made Metropolitan Tickers Etc. Co. Ltd Contract No. 414770/1/02 When made 1939

No. of Sets One Engine Brake Horse Power 64 Nom. Horse Power as per Rule 18.3 Total Capacity of Generators 39 Kilowatts.

TYPE OF ENGINES, &c.—Type of Engines 4 VQZ—Vertical Solid Injection 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 800 lbs Diameter of cylinders 5 3/8" Length of stroke 8" No. of cylinders 4 No. of cranks 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6 1/4" Is there a bearing between each crank Yes

Revolutions per minute 900 Flywheel dia. 27" Weight 414 lbs Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule Approved 3 5/8" Crank pin dia. 3 1/4" Crank Webs Mid. length breadth 5 7/8" Thickness parallel to axis

Flywheel Shaft, diameter as per Rule Approved 3 5/8" Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 1/2"

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, twin geared

Air Compressors, No. One No. of stages Single Diameters 2 3/4" Stroke 3" Driven by Amp. Engines

Scavenging Air Pumps, No. Diameter Stroke Driven by

AIR RECEIVERS:—Have they been made under Survey Yes State No. of Report or Certificate C 3438

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 Inspection hole

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

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. One Total cubic capacity 3.25 cu. ft. Internal diameter 1'-3" 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 Dip-proof

Pressure of supply 220 volts. Full Load Current 177 Amperes. Direct or Alternating Current Direct

Is an 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

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

Do 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

Do the generators are 100 kw. or over have they been built and tested under survey

PLANS. Are approved plans forwarded herewith for Shafting 24-10-33 Receivers 5-5-38 Separate Tanks 25-2-38

SHAFTING AND GEAR As per Rule requirements.

The foregoing is a correct description,  
Ruston & Hornsby Limited,  
Asst. Mgrs  
13-11-39

Manufacturer.

Oil & Gas Engine Dept.



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Foundation

003282 003289 0004

Dates of Survey while building { During progress of work in shops - - } 1938 Nov 14, 17, 28 Dec 1. 1939 Jan 5, 9 Feb 16 Mar 7, 21 Apr 24 May 15, 23 June 13 July 13 Aug 31 Nov 26  
 { During erection on board vessel - - - }  
 Total No. of visits 19

Dates of Examination of principal parts—Cylinders 31-8-39 Covers 31-8-39 Pistons 31-8-39 Piston rods ✓

Connecting rods 24-4-39 Crank and Flywheel shafts 5-1-39 Intermediate shafts ✓

Crank and Flywheel shafts, Material Steel Identification Marks LLOYDS 3472-5-1-39AS

Intermediate shafts, Material ✓ Housing Identification Marks LLOYDS 3473-31-8-39AS

Identification marks on Air Receivers 8885  
 Lloyd's Test  
 600 lbs.  
 WP. 300 lbs.  
 9-11-39AS

Is this machinery duplicate of a previous case Yes If so, state name of vessel Lus. Apt. No. 20962.

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

This engine has 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 Maker's works with satisfactory results.

The engine is being shipped to Messrs. Greenock Dockyard Co. Ltd., Greenock, for fitting on board the vessel.

3761/1/39/12/598-P/12/12691.  
 Request form attached Lus. Rpt. 20962

The amount of Fee ...	£ 4 : 18 : 8	When applied for,	15.11.39
Travelling Expenses (if any) £	—	When received,	8 <sup>th</sup> FEB. 1940

*W. A. Christie*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 16 APR 1940

Assigned SEE ACCOMPANYING MACHINERY REPORT,



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This "Whi executed, whatever entry in the Committee (Rpt. 10.) 20