

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

28 JAN 1955

Received at London Office

Date of writing Report 20.1.55 When handed in at Local Office 19 Port of Nottingham

No. in Survey held at Lincoln Date, First Survey 15.12.54 Last Survey 30.12.54 19 Reg. Book. Number of Visits 3

Single on the Twin Triple Quadruple

Screw vessel

"LSOCARDIA"

Tons Gross Net

to the order of:- By Chantier Et Ateliers de St. Nazaire. Vessel No. Q. 15. When built

Owners Port belonging to

Oil Engines made at Lincoln By whom made Ruston & Hornsby Ltd. Contract No. 385954 When made

Generators made at Bedford By whom made W. H. Allen, Sons & Co. Ltd. Contract No. E3/60700 When made

No. of Sets 1 Engine Brake Horse Power 240 M.N. as per Rule 48 Total Capacity of Generators 150 Kilowatts.

Is Set intended for essential services

OIL ENGINES, &c.—Type of Engines 4VEBZ. 2 or 4 stroke cycle 4 Single or double acting SA

Maximum pressure in cylinders 715 ± 3% Diameter of cylinders 10 1/2" Length of stroke 14 1/2" No. of cylinders 4 No. of cranks 4

Mean indicated pressure 100 Firing order in cylinders 1. 4. 3. 2. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 12.5 1/8

Is there a bearing between each crank Yes. GD<sup>2</sup> - 38.7 tons ft. Revolutions per minute 514

Flywheel dia. 4'-6" Weight 61 cwts. Means of ignition Compression Kind of fuel used Diesel Oil.

Crank Shaft, dia. of journals 8" Crank pin dia. 6 1/4" Crank Webs Mid. length breadth 11" Thickness parallel to axis -

Flywheel Shaft, diameter Intermediate Shafts, diameter General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)

Are means provided to prevent racing of the engine when declutched Yes. Means of lubrication Kind of damper if fitted

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 engine driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size One Engine driven 772 gals/hour.

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 DP. CW. CR. Machine No. E3/60700.

Pressure of supply 187.5 volts Full Load Current 514 Amperes Direct or Alternating Current DC.

If alternating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full 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 and do the results comply with the requirements

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

Details of driven machinery other than generator

PLANS.—Are approved plans forwarded herewith for Shafting 20.12.38 Receivers Separate Tanks

Have Torsional Vibration characteristics if applicable been approved 14.8.53 Armature shaft Drawing No.

SHAFTING GEAR Supplied to Rule Requirements.

The foregoing is a correct description,

Ruston & Hornsby, Limited Manufacturer.

J. Marshall



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Lloyd's Register Foundation

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Dates of Survey while building { During progress of work in shops - - 15.12.54. 12.7.54. 30.12.54. During erection on board vessel - - - Total No. of visits 3.

Dates of Examination of principal parts - Cylinders 15.12.54. Covers As cyls. Pistons - Piston rods -

Connecting rods as cyls. & 12.7.54. Crank and Flywheel shafts As cyls. Intermediate shafts -

Crank shaft { Material Steel. Tensile strength Identification Marks II. 4845. I.E. 6668. Elongation

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers

Is this machinery duplicate of a previous case. If so, state name of vessel

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This Engine has been built under Special Survey in accordance with the Approved Plans and the Rules of the Society, materials and workmanship being good. On completion, the generating set was tested in the Shops under working conditions and the governing tested with satisfactory results. The set has been forwarded for installation in the vessel. Explosion relief device fitted on each crankcase door.

500.1.18-T. (MADE AND PRINTED IN ENGLAND) (The Surveyors are requested not to write on or below the space for Committee Minutes.)

The amount of Fee ... £ 19. : When applied for 20.1.55.19 C.20286. A/C. No. 8325. Travelling Expenses (if any) £ : When received 19

FRIDAY 20 JAN 1956

Committee's Minute

Assigned

