

CE

NOV 1948

Rpt No. 40  
N.D.O.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 381.

Received at London Office. 26 NOV 1948

Date of writing Report 19... When handed in at Local Office 7 19... Port of NOTTINGHAM

AT NEWCASTLE-ON-TYNE - 9 FEB 1949

No. in Survey held at Lincoln Date, First Survey... Last Survey... 19

Reg. Book. on the Triple Screw vessel "PALUDINA" Number of Visits PLEASE SEE OVER Gross 6114.45

Net 1026.30

Built at Newcastle By whom built Sgt. Hunter & Wigham, Rich. to Yard No 1771 when built 1949-1 mo

Wallsend Slipway & Eng. Co. Ltd. Eng. No. 1007

Owners Anglo Saxon Petroleum Co. Ltd Port belonging to LONDON

12/460381.

Oil Engines made at Lincoln By whom made Ruston & Hornsby Ltd. Contract No. When made 1948

Generators made at Sunderland By whom made Sunderland Forge & Eng. Co. Ltd. Contract No. When made

No. of Sets 1 Engine Brake Horse Power 54 M.N. as per Rule 13.6 Total Capacity of Generators 30 Kilowatts.

Is Set intended for essential services Lighting & motors for Centrifuges.

OIL ENGINES, &c.—Type of Engines 4VPHZ. Eng. No. 259606 2 or 4 stroke cycle 4 Single or double acting SA

Maximum pressure in cylinders 1000 lbs. Diameter of cylinders 5.3/8" Length of stroke 8" No. of cylinders 4 No. of cranks 4

Mean indicated pressure 109 lbs. Ring order in cylinders 1-3-4-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6.25/32"

Is there a bearing between each crank Yes WD<sup>2</sup> Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 2240 lb. ft. Revolutions per minute 675

Flywheel dia. 2'-8" Weight 510 lbs. Means of ignition Compression Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule... as fitted 4.3/16" Crank pin dia. 3 1/2" Crank Webs Mid. length breadth 5 3/4" Thickness parallel to axis -

Mid. length thickness 1 5/8" shrunk Thickness round eyehole -

Flywheel Shaft, diameter as per Rule... as fitted Intermediate Shafts, diameter as per Rule... as fitted 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 Forced 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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size one, 376 gals. per hour. Engine driven.

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 No. G. 7501.

Pressure of supply 110 volts. Full Load Current 273 Amperes. Direct or Alternating Current D.C.

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 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

Details of driven machinery other than generator

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

Have Torsional Vibration characteristics if applicable been approved Not applicable. Armature shaft Drawing No.

SPARE GEAR To Rule requirements.

The foregoing is a correct description, Ruston & Hornsby Limited.

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Engineering Divn., Manufacturer.



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Lloyd's Register Foundation

005397-005402-0016

Dates of Survey while building  
 During progress of work in shops - - 9.6.48. 30.8.48.  
 During erection on board vessel - - -  
 Total No. of visits 2

Dates of Examination of principal parts—Cylinders 9.6.48. Covers 9.6.48. Pistons 9.6.48. Piston rods -  
 Connecting rods 9.6.48. Crank and Flywheel shafts 9.6.48. Intermediate shafts -

Crank shaft Material S.M. Steel. Tensile strength  
 Elongation Identification Marks LL.2275. RD.8231.

Flywheel shaft, Material - Identification Marks

Identification marks on Air Receivers

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

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

This engine has been built under Special Survey, in accordance with Approved Plans and Regulations of Society, material and workmanship being good.

On completion the set was tried in the Shops under working conditions and found satisfactory.

The set has been forwarded to Newcastle for installation on board the vessel.

**SURVEY OF MACHINERY.** FIRST SURVEY 11-3-47 LAST SURVEY 21-1-49  
 NEWCASTLE-ON-TYNE

*This 30KW. Oil Engine/Elec Gen Set has been efficiently fitted at forward end of main Engine Room, tested under working conditions with good results*

*W. Watt*  
*Surveyor*  
 January 1949.  
 SURVEYOR TO LLOYD'S REGISTER  
 NEWCASTLE-ON-TYNE.

The amount of Fee ... £ 4 : 0 : 0 When applied for 4.11. 19 48.  
 Travelling Expenses (if any) £ : : When received 19

Committee's Minute. **FRI. 1 APR 1949**

Assigned *See F.E. mch. rpt.*



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