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Rpt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 322.

Date of writing Report 19 When handed in at Local Office 19 Port of **NOTTINGHAM.** Received at London Office **11 JUN 1948**

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

on the **Single** Screw vessel **M.V. HUNTINGDON** Number of Visits **11281**  
**Triple** Tons Gross **6658**  
**Quadruple** Net

Built at **Glasgow** By whom built **Alex. Stephens & Sons Ltd.** Yard No. **612** When built **1948**

Owners **Federal Steam Nav. Co. Ltd.** Port belonging to **London**  
**17/450374.**

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

Generators made at **Bedford** By whom made **W.H. Allen, Sons & Co. Ltd.** Contract No. When made **1948**

No. of Sets **1** Engine Brake Horse Power **48** M.N. as per Rule **12** Total Capacity of Generators **31** Kilowatts.

Is Set intended for essential services

**OIL ENGINES, &c.**—Type of Engines **4VRHZ.** No. **251621.** 2 or 4 stroke cycle **4** Single or double acting **SA**

Maximum pressure in cylinders **800 lbs.** Diameter of cylinders **4 1/2"** Length of stroke **5 1/2"** No. of cylinders **4** No. of cranks **4**

Mean indicated pressure **112.5** lbs. Firing order in cylinders **1-3-4-2** Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **6.15/16"**

Is there a bearing between each crank **Yes** ~~between each crank~~ flywheel ~~(1000 or 1000 lb.)~~ **1004 lb.** ft.<sup>2</sup> Revolutions per minute **1200**

Flywheel dia. **25"** Weight **385 lbs.** Means of ignition **Compression** Kind of fuel used **Diesel Oil**

Crank Shaft, dia. of journals **3"** as per Rule **Stand. App'd.** Crank pin dia. **3"** Mid. length breadth **3 1/2"** Thickness parallel to axis **-**

as fitted **3"** Crank Webs Mid. length thickness **1.11/16"** Thickness round eyehole **-**

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

as fitted **C'shaft.** 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. **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 180 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 Machine No. **E2/61135/2.**

Pressure of supply **220 volts.** Full Load Current **141** 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 and do the results comply with the requirements

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** As rule requirements.

**Ruston & Hornsby Limited.**

The foregoing is a correct description,

*Moans* 8 VI 48

Engineering Divn.

Manufacturer.



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Dates of Survey while building  
During progress of work in shops - 1.12.47. 7.4.48.  
During erection on board vessel - -  
Total No. of visits 2

Dates of Examination of principal parts—Cylinders 1.12.47. Covers 1.12.47. Pistons 1.12.47. Piston rods -

Connecting rods 1.12.47. Crank and Flywheel shafts 1.12.47. Intermediate shafts

Crank shaft  
Material Steel. Tensile strength 40-45 Tons/sq.in. Min.  
Elongation Identification Marks LL.1219. TDS. 3094 BW.

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 Vickers Armstrong Ltd. Rpt. 220.

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

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

The set has been tested in the shops on full load under working conditions, together with the automatic starting and stopping switch gear and found satisfactory.

The generating set has been forwarded to Glasgow for installation on board the vessel as emergency generator.

*This emergency generator set has been satisfactorily installed on board the vessel "Huntingdon" (Stephen, Yd No 612) The set was examined under full working conditions and found good*

*SK Macdonald*

*Signed 20.12.48.*

The amount of Fee ... £ 4 : 0 : 0 When applied for 10.6. 1948.  
Travelling Expenses (if any) £ : : When received 19

Committee's Minute GLASGOW 1 - JUN 1948

Assigned

SEE ACCOMPANYING MACHINERY REPORT

Surveyor to Lloyd's Register of Shipping.

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