

Rpt. 4c.

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 157.

MAR 1947

Received at London Office

19 MAR 1947

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

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

Single on the Twin Triple Quadruple Screw vessel M/V "LEPTON" Tons Gross Net

Built at Belfast By whom built Harland &amp; Wolff Ltd., Yard No. 1346 When built

Owners Port belonging to 12/

of Oil Engines made at Lincoln By whom made Ruston &amp; Hornsby Ltd., Contract No. 450707 When made 1947

Generators made at Sunderland By whom made Sunderland Forge &amp; Eng. Co., Ltd. Contract No. When made 1947

No. of Sets 1 Engine Brake Horse Power 48 M.N. as per Rule 12 Ltd. Capacity of Generators 30 Kilowatts

Is Set intended for essential services

OIL ENGINES, &amp;c.—Type of Engines 4VPHZ. Eng. No. 247292 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. Firing 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 Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 2240 lb.-ft<sup>2</sup> 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 4.3/16" Crank pin dia. 3 1/4" Mid. length breadth 5 5/8" Thickness parallel to axis -

as fitted 4.3/16" Crank Webs Mid. length thickness 1 3/4" 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 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 Sunderland Forge No. G. 6365

Pressure of supply 110 volts Full Load Current 27.3 Amperes Direct or Alternating Current D.C.

Is an 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 is an adjustable regulating resistance fitted in series with each shunt field

Are all terminals accessible, clearly marked, and furnished with sockets Are they so spaced

Are they shielded that they cannot be accidentally earthed, short circuited, or touched Are the lubricating arrangements of the generators as per Rule

Do the generators are under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements

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

Details of driven machinery other than generator Through Clutch. One Reavell &amp; Co. Ltd., Air Compressor No. 97701

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

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

(state date of approval)

SHAFTING GEAR

RUSTON & Hornsby, Limited.  
The foregoing is a correct description,Hornsby  
Oil & Gas Engine Dept.  
Manufacturer.

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Lloyd's Register  
Foundation

003572-003580-0177



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

Dates of Examination of principal parts—Cylinders 13.11.46. Covers 13.11.46. Pistons 13.11.46. Piston rods.....

Connecting rods 13.11.46. Crank and Flywheel shafts 12.8.46; 13.11.46. Intermediate shafts.....

Crank shaft { Material S.M.Steel. Tensile strength See Bmn. Cert. G.4350.  
Elongation..... Identification Marks LL.3573. TDS. S.H.6101.

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, &c.).....

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 Belfast for installation on board the Vessel.

The amount of Fee ... £ 4 : 0 : 0 { When applied for 18-3- 19 47.  
Travelling Expenses (if any) £ : : { When received..... 19  
Committee's Minute.....  
Assigned.....

