

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 119485

pt. 4c.

Date of writing Report 8 Dec 1948 When handed in at Local Office 9 Dec 1948 Port of LONDON Received at London Office

No. in Survey held at Date, First Survey 26-10-48 Last Survey 30-11-1948 No. of Visits 3

on the Twin Screw vessel Blackthorn Birch Tons Gross Net

By whom built Yard No When built

Engines made at Dagenham By whom made Russell Newbery & Co Ltd Engine No 20L36 Contract No D 2846 When made 1948

Generators made at Norwich By whom made Laurence Scott Contract No 156310 When made 1948

No. of Sets 1 Engine Brake Horse Power 20 M.N. as per Rule Total Capacity of Generator 12 Kilowatts

Set intended for essential services

OIL ENGINES, &c. Type of Engines High speed Compression ignition 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 850 Diameter of cylinders 4 1/2" Length of stroke 6" No. of cylinders 2 No. of cranks 2

Mean indicated pressure 105 Firing order in cylinders 1 2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5 1/2"

Is there a bearing between each crank Yes Moment of inertia of flywheel 973 lb in 4 revolutions per minute 1200

Flywheel dia 25" Weight 325 lbs Means of ignition Solid Kind of fuel used pool

Crank Shaft, dia. of journals as per Rule 2 5/8" as fitted Crank pin dia 2 5/8" Crank Webs Mid. length breadth 3 1/2" Thickness parallel to axis one

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

Are means provided to prevent racing of the engine when declutched Yes Means of lubrication forced Kind of damper if fitted none

Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

Cooling Water Pumps, No 1 plunger Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No and size gear drive pump Half engine speed

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 Pressure of supply volts Full Load Current Amperes Direct or Alternating Current

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

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

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 Receivers Separate Tanks

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

SPARE GEAR Makers supply covers Rule requirements

The foregoing is a correct description,

John Russett

Manufacturer.

For and on behalf of RUSSELL NEWBERY & CO. LTD.



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011890-011895-0174

Dates of Survey while building

During progress of work in shops - -
During erection on board vessel - -
Total No. of visits

26th-10-48 - 9th And 30th November 1948

3+

Dates of Examination of principal parts—Cylinders 26-10-48 Covers 26-10-48 Pistons 26-10-48 Piston rods. ✓

Connecting rods. 26-10-48 Crank and Flywheel shafts 26-10-48 Intermediate shafts. ✓

Crank shaft { Material EN12 Tensile strength 40 ton
Elongation 22% Identification Marks 3554/3-11-48 22AP

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.)

The engine has been built under Special Survey of tested materials and the workmanship is good.

The engine is directly coupled to one Laurence Scott D.C. Generator No 156310 - 220V - 54.5A - 12KW and securely bolted to a fabricated steel underframe.

The set is intended for Vosper's order No 86002

The engine on completion of erection was examined under full load conditions & governor trials were carried out all found satisfactory

The amount of Fee ... £ 4 : 0 : 0 When applied for 9 Dec 1948

Travelling Expenses (if any) £ : : When received 19

Committee's Minute

Assigned

J. Seller

Surveyor to Lloyd's Register of Shipping.



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