

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 156.

20 MAR 1947

Date of writing Report

19

When handed in at Local Office

19

Received at London Office

19 MAR 1947

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

BEAVERCOVE

Tons

Gross

Net

Built at Glasgow.

By whom built. Fairfield S.B. & E. Co. Ltd.

Yard No. 728

When built

Owners

Port belonging to

Oil Engines made at Lincoln.

By whom made Ruston & Hornsby Ltd.

Contract No. 451668

When made 1946

Generators made at

By whom made Lancashire Dynamo & Crypto

Contract No. 215627

When made 1946

No. of Sets 1

Engine Brake Horse Power 22.5

M.N. as per Rule 5.6

Total Capacity of Generators 10

Kilowatts.

Is Set intended for essential services.

OIL ENGINES, &c.—Type of Engines 3VSHZ. Eng. No. 242033.

2 or 4 stroke cycle 4

Single or double acting SA

Maximum pressure in cylinders 850 lbs.

Diameter of cylinders 4.1"

Length of stroke 4.1"

No. of cylinders 3

No. of cranks 3

Mean indicated pressure 104.5 lb

Firing order in cylinders 1 - 3 - 2

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5.7/16"

Is there a bearing between each crank Yes.

Yes.

Moment of inertia of flywheel (16 m² or Kg.-cm.²) 808 lb.ft²

Revolutions per minute 1000

Flywheel dia. 22.5"

Weight 346 lbs.

Means of ignition Compression.

Kind of fuel used Diesel Oil.

Crank Shaft, dia. of journals

as per Rule.

2.3"

Crank pin dia. 2.3"

Crank Webs

mean

3.3"

Thickness parallel to axis

Flywheel Shaft, diameter

as per Rule.

as fitted.

Intermediate Shafts, diameter

as per Rule.

as fitted.

General armature, moment of inertia (16 m² or Kg.-cm.²)

Are means provided to prevent racing of the engine when declutched Yes.

Yes.

Means of lubrication Forced.

Kind of damper if fitted

Are the cylinders fitted with safety valves No.

No.

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- 165 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. 215627

Pressure of supply 220 volts.

Full Load Current 45.5

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.

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 the generators 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

Clutch. Hamworthy Air Compressor No. 70449.

PLANS.—Are approved plans forwarded herewith for Shafting

Standard Approved.

Receivers

Separate Tanks

Have Torsional Vibration characteristics if applicable been approved

(If not, state date of approval)

Armature shaft Drawing No.

SPARE GEAR

Spare gear as per attached list

? Spares.

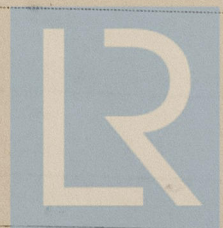
Ruston & Hornsby, Limited,

The foregoing is a correct description,

Horns

Manufacturer.

Oil & Gas Engine Dept



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Lloyd's Register
Foundation

010805-010815-0019

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 22.11.46. Covers 22.11.46. Pistons 22.11.46. Piston rods -
Connecting rods 22.11.46. Crank and Flywheel shafts 15.11.46. 22.11.46. Intermediate shafts -

Crank shaft { Material Steel. Tensile strength 40-45 Tons/sq. in.
Elongation Identification Marks LL 859. TDS. A.S. 521.

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.)

The engine has been surveyed during construction in accordance with the Approved Plans and the Regulations of this Society, materials and workmanship being good.

The engine has been tested in the shop under working conditions and found to be satisfactory.

The generating set has been forwarded to Glasgow for installation on board the Vessel.

This engine has been efficiently installed in the vessel and tested under working conditions with satisfactory results. Specimen as per attached list
S. H. Macdonald
Glasgow, 30.8.47

The amount of Fee ... £ 4 : 0 : 0 { When applied for 25-2-19 47.
Travelling Expenses (if any) £ : : { When received 19

Committee's Minute.....

Assigned.....