

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 159.

Received at London Office 2 APR 1947

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

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

Reg. Book. Number of Visits

Single on the Twin Triple Quadruple Screw vessel Tons Gross Net

Built at Belfast. By whom built Harland & Wolff Ltd. Yard No. When built

Owners. Port belonging to 12/

Oil Engines made at Lincoln. By whom made Ruston & Hornsby Ltd. Contract No. 450708 When made 1947

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

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

Set intended for essential services.

OIL ENGINES, &c.—Type of Engines 4VPHZ. Engine No. 247293. 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 2240 lb.ft. Revolutions per minute 675

Flywheel dia. 2' 3" 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" Crank Webs Mid. length breadth 5 3/8" Thickness parallel to axis -

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule General armature, moment of inertia (16 m² 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

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.

Sucking Air Pumps, No. Diameter. Stroke. Driven by.

AIR RECEIVERS:—Have they been made under Survey State No. of Report or Certificate.

332 Each receiver, which can be isolated, fitted with a safety valve as per Rule.

Are 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.

Sucking 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. 6366.

Pressure of supply 110 volts. Full Load Current 27.3 273 Amperes. Direct or Alternating Current D.C.

Alternating current system, state the periodicity. Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown

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

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

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

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

Tools of driven machinery other than generator. Through clutch. One Reavell & Co. Ltd., Air Compressor No. 97702.

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

(If not, state date of approval)

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

(state date of approval)

GEAR

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

Hornsby 25 III 47

Manufacturer.

Oil & Gas Engine Dept.



© 2020

Lloyd's Register
Foundation

003611-003619-0252

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 15.11.46. Covers 15.11.46. Pistons 15.11.46. Piston rods.....
Connecting rods 15.11.46. Crank and Flywheel shafts 16.9.46. 15.11.46. Intermediate shafts.....

Crank shaft { Material S.M. Steel. Tensile strength See Brm. Cert. C. 4444.
Elongation..... Identification Marks LL. 3708B. TDS. SH. 6119.

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, materials 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.

ML-1 (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minute.)

The amount of Fee ... £ 4 : 0 : 0 { When applied for 28-3-1947.
Travelling Expenses (if any) £ : : { When received..... 19.....

Committee's Minute.....
Assigned Su F.E. mchy. rpt.