

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 14276.

Rpt. 4c.

D.O.

Date of writing Report 30th August, 1950. When handed in at Local Office 31st August, 1950. Port of MANCHESTER. Received at London Office 30 JUN 1951

No. in Survey held at HAZELGROVE, STOCKPORT. Date, First Survey 1st June, 1950. Last Survey 30th August, 1950. Reg. Book. Number of Visits 11.

on the Single Screw vessel. Classed Vessel. — 'BRITISH VISCOUNT' Tons Gross 8663.57 Net 4935.51

Built at Wallsend-on-Tyne. By whom built Swan, Hunter & Wigham Richardson. Yard No 1878. When built

Owners. Port belonging to

Oil Engines made at Hazel Grove. By whom made Mirrlees, Bickerton & Day Ltd. Engine Nos. 32373-4. Contract No. 3237. When made 1950.

Generators made at Sunderland. By whom made Sunderland Forge & Eng. Co. Generators 41494. Contract Nos 11491. When made 1950.

No. of Sets Two. Engine Brake Horse Power 135 x 2. M.N. as per Rule 34 x 2. Total Capacity of Generators 75 x 2. Kilowatts. Total = 150.

Is Set intended for essential services.

OIL ENGINES, &c.—Type of Engines Mirrlees TLA.3 Type, Heavy Oil. 2 or 4 stroke cycle 4. Single or double acting Single.

Maximum pressure in cylinders 800 lbs/sq. inch. Diameter of cylinders 8 1/2". Length of stroke 13 3/4". No. of cylinders 3. No. of cranks 3.

Mean indicated pressure 115 lbs/sq. inch. Firing order in cylinders 1, 3, 2. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 8.5/8".

Is there a bearing between each crank Yes. Moment of inertia of flywheel 16420 Kg-cm². Revolutions per minute 500.

Flywheel dia 4' - 6". Weight 2800 lbs. Means of ignition Compression. Kind of fuel used Diesel.

Crank Shaft, dia. of journals As per Rule. As approved. Crank pin dia 5.9/16". Crank Webs Mid. length breadth 9 1/2". Thickness parallel to axis.

Flywheel Shaft, dia. of crankshaft. Intermediate Shafts, diameter as per Rule. General armature, moment of inertia 249 lb ins sec².

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 Yes.

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 per Engine. Gear Type, Engine Driven. Capacity 666 G.P.H.

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 Yes. State No. of Report or Certificate.

Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes.

Can the internal surfaces of the receivers be examined Yes. What means are provided for cleaning their inner surfaces. Cleaning Doors.

Is there a drain arrangement fitted at the lowest part of each receiver Yes.

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. One per Engine. Total cubic capacity 5 x 2 = 10 Cu. ft. Internal diameter 1' - 6". thickness 5/16".

Seamless, lap welded or riveted longitudinal joint. Material M.S. Range of tensile strength 26/30. Working pressure by Rules 395 lbs/sq. inch.

ELECTRIC GENERATORS:—Type Open Type. Ventilated, Drip Proof, Compound Wound.

Pressure of supply 110 volts. Full Load Current 682. Amperes. Direct or Alternating Current Direct.

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. Built and tested under survey. and do the results comply with the requirements.

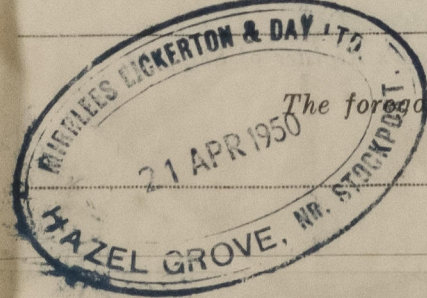
If the generators are 100 kw. or over have they been built and tested under survey.

Generator Identification Marks: Lloyd's Test S.D.B. 26.7.50.

PLANS.—Are approved plans forwarded herewith for Shafting Crankshaft 2.7.48. Receivers. Separate Tanks.

Have Torsional Vibration characteristics if applicable been approved Yes for 500 R.P.M. 22.10.48. Armature shaft Drawing No. 43938. Noted 22.10.48.

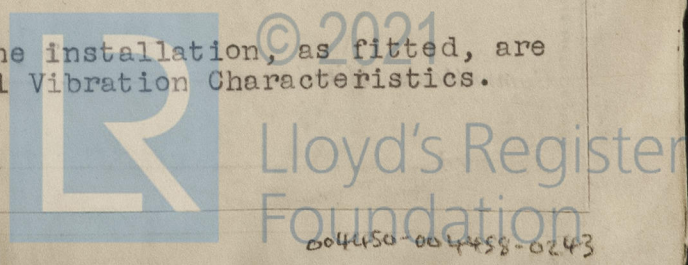
SPARE GEAR AS PER RULE REQUIREMENTS.



The foregoing is a correct description, and the particulars of the installation, as fitted, are as approved for Torsional Vibration Characteristics.

Chief Draughtsman.

Manufacturer.



Dates of Survey while building { During progress of work in shops - - 1950. June 1, 13, 19, 23. July 5, 10, 11, 12, 14. Aug. 10, 30.
During erection on board vessel - - -
Total No. of visits

Dates of Examination of principal parts—Cylinders 1.6.50. 19.6.50. 10.8.50. Exhaust 23.6.50.
Liners 5.7.50. Covers 12.7.50. Pistons 30.8.50. Manifold 14.7.50.
Connecting rods 1.6.50. 14.7.50. Crank and Flywheel shafts Cylinder 13.6.50. 10.7.50.
Casings.

Crank shaft { Material Siemens Steel. Tensile strength L.R. 88749. Lloyd's HKS 3012/1
Elongation Identification Marks L.R. 88756. Lloyd's HKS 3012/1
Flywheel shafts Materials CRANKSHAFT Identification Marks HKS 27.4.5

Identification marks on Air Receivers J. & H. McLaren No. 8708 Lloyd's Test. T.P. 700 lbs. W.P. 350 lbs. RMcL Date
J. & H. McLaren No. 8734 Lloyd's Test T.P. 700 lbs. W.P. 350 lbs. RMcL Date

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.) These Diesel Generator Sets have been constructed under Special Survey of tested materials and in accordance with the Secretary's letter approved plans and Rule requirements. The material, so far as could be seen, appeared sound and free from defects. The Workmanship is good.

Each Engine, direct coupled to its respective Electric Generator, was tested at the Engine Builders' Works, under the following conditions of loading and found satisfactory: 6 Hours 100% Load, 1 Hour 110% Load.

Torsional vibration characteristics of the shafting installation of this auxiliary machinery have been examined and approved for a service speed of 500 R.P.M.

In the opinion of the undersigned, these Diesel Generator Sets are suitable for installation in a vessel classed with the Society, for the purpose intended.

Forging Reports, Air Receiver Certs. and Generator Certificates will be forwarded later.

SURVEY OF MACHINERY.

The Generator Sets have now been satisfactorily installed in the vessel

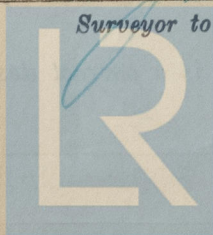
SURVEYOR TO LLOYD'S REGISTER
NEWCASTLE-ON-TYNE.

The amount of Fee ... £ 13 : 12 : 0. When applied for 31.8.50 19.8.50
Travelling Expenses (if any) £ 3 : 0 : 0. When received 19.8.50

FRI. 20 JUL 1951

Committee's Minute
Assigned See F.E. sketch ypt.

W. J. B. B. B.
Surveyor to Lloyd's Register of Shipping.



Lloyd's Register
Foundation