

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13055.

6th August, 1947. When handed in at Local Office 4th November, 1947. Received at London Office 7th January 1948.
 Writing Report 19. Port of MANCHESTER.
 Survey held at MANCHESTER. Date, First Survey 2nd May, 1947. Last Survey 14th July, 1947.
 Number of Visits 7.
 on the Twin Screw vessel EL MALEK FORD Tons Gross 3745.64 Net.
 at Southampton. By whom built J. I. Thornycroft & Co. Yard No. 4108. When built 1947-12.
 Khedival Mail Line. Port belonging to ALEXANDRIA.
 Engines made at Hazel Grove. By whom made Mirrlees, Bickerton & Day Ltd. Engine No. 30101. When made 1947.
 Generators made at Dursley. By whom made Messrs. Maudsley Ltd. Generator No. 2608177. When made 1947.
 One. Engine Brake Horse Power 225. M.N. as per Rule 56.25. Total Capacity of Generators 125. Kilowatts.
 intended for essential services. Yes.

ENGINES, &c.—Type of Engines Vertical, Solid Injection Heavy Oil. 2 or 4 stroke cycle. 4. Single or double acting Single.
 num pressure in cylinders 800 lbs. Diameter of cylinders 8 1/2". Length of stroke 13 3/4". No. of cylinders 5. No. of cranks 5.
 indicated lbs per sq. inch 115. Firing order in cylinders 1, 3, 5, 4, 2. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 8 5/8".
 pressure 115. There is a bearing between each crank. Yes. Moment of inertia of flywheel 5,700. Revolutions per minute 500.
 ad c. wheel dia. 4' - 0". Weight 2200 lbs. Means of ignition Compression. Kind of fuel used Diesel Oil.
 as per Rule Approved. Crank pin dia. 5 9/16". Crank Webs Mid. length breadth 8 1/2". Thickness parallel to axis.
 k Shaft, dia. of journals 5 3/4". as fitted. Flywheel mounted on end of Crankshaft. Intermediate Shafts, diameter as per Rule.
 as fitted. General armature, moment of inertia (16 m² or Kg.-cm.²).
 means provided to prevent racing of the engine when declutched. Yes. Means of lubrication Forced. Kind of damper if fitted.
 the cylinders fitted with safety valves. Yes. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material. Yes.
 d t. ing Water Pumps, No. One 2000 G.P.H. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.
 re. Heating Oil Pumps, No. and size One 670 G.P.H.

Compressors, No. No. of stages. Diameters. Stroke. Driven by.
 enging Air Pumps, No. Diameter. Stroke. Driven by.

RECEIVERS:—Have they been made under Survey Yes. State No. of Report or Certificate C. 5273.
 ch receiver, which can be isolated, fitted with a safety valve as per Rule. Yes.
 the internal surfaces of the receivers be examined. Yes. What means are provided for cleaning their inner surfaces Hand Holes.
 ere a drain arrangement fitted at the lowest part of each receiver Yes.
 Pressure Air Receivers, No. Cubic capacity of each. Internal diameter. thickness.
 less, lap welded or riveted longitudinal joint. Material. Range of tensile strength. Working pressure by Rules.
 ing Air Receivers, No. Total cubic capacity. Internal diameter. thickness.
 less, lap welded or riveted longitudinal joint. Material. Range of tensile strength. Working pressure by Rules.

ELECTRIC GENERATORS:—Type Compound wound, Drip Proof, Ventilated, Continuous Rating.
 225/230. Full Load Current 550. Amperes. Direct or Alternating Current Direct.
 ernating current system, state the periodicity. Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown
 nd off Yes. Generators, are they compounded as per Rule. Yes. is an adjustable regulating resistance fitted in series with each shunt field. Yes.
 all terminals accessible, clearly marked, and furnished with sockets. Yes, as per Rule Requirements. Are they so spaced
 ielded that they cannot be accidentally earthed, short circuited, or touched. Yes. Are the lubricating arrangements of the generators as per Rule. Yes.
 e generators are under 100 kw. full load rating, have the makers supplied certificates of test. and do the results comply with the requirements.
 e generators are 100 kw. or over have they been built and tested under survey. Yes, marked Lloyd's M. 1733, 17.6.47.

Are approved plans forwarded herewith for Shafting 11th June, 1946. Receivers. Separate Tanks.
 (If not, state date of approval) 18th November, 1946. Armature shaft Drawing No.
 Torsional Vibration characteristics if applicable been approved. (state date of approval)
 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.

Mirrlees Bickerton & Day Ltd
 J. I. Thornycroft & Co.
 Chief Draftsman

Manufacturer.

Dates of Survey while building: 1947. May 2, 13, 21. July 11, 14.
 During construction of hull: 1947. SEPT 3, 10, 17, NOV 4, 21, 24, DEC 10.
 Total No. of trials: 14.
 Dates of Examination of principal parts: Cylinders 13.5.47. Covers 13.5.47. Pistons 14.7.47.
 Connecting rods 21.5.47. Crank and flywheel shafts 21.5.47. Intermediate shafts -
 Crank shaft Material O.H. Steel. Tensile strength 42.9 Tons per sq. inch.
 Identification Marks LLOYD'S 4532 R.J.M. 15.5.
 Flywheel shaft Material - Identification Marks -
 Identification marks on an Engine: S.17785.
 LLOYD'S TEST.
 790 lbs.
 W.P. 395 lbs.
 T.D.S. 16.4.47.

Is this machinery duplicate of a previous case? No. If so, state name of vessel.
GENERAL REMARKS (State quality of workmanship, opinions as to class, etc.) This engine has been constructed under special survey of tested materials in accordance with the Secretary's letters, approved plans and Requirements of the Rules. Materials and workmanship are good and when tested in the shop under full load conditions the engine showed satisfactory results. The torsional vibration character of the shafting installation were approved on the 18th November, 1946.
 In our opinion, this engine is suitable for installation in a vessel to be classed with this Society, for the purpose intended.

Southampton: This engine has been securely fitted on board vessel, on the forward port side of 2nd platform. On completion of fitting on board, the machine was tried under full working conditions with satisfactory results. Material & workmanship good.
 This engine is eligible in my opinion to be classed with the rest of vessel's machinery and to have the record of LMC 12.47.

The Surveyors are requested not to write on or below the space for Committee Minutes.

The amount of Fee ... £ 8 8 9. When applied for 4 11 19 478
 Travelling Expenses (if any) £ 1 6 3. When received 19

WLD
 Committee's Minute
 See F.E. meby. opt.
 Assigned

FRI. 20 FEB 1948

R. J. M. & Co. White
 Surveyors to Lloyd's Register of Shipping.
 J. Michael
 Lloyd's Register Foundation