

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13056.

of writing Report 6th August, 1947. When handed in at Local Office 4th November, 1947. Port of MANCHESTER. Received at London Office 10 NOV 1947

in Survey held at MANCHESTER. Date, First Survey 13th May, 1947. Last Survey 14th July, 1947. Number of Visits 6.

Book. on the Single Triple Quadruple Screw vessel EL MALEK FORD Tons { Gross 3745.64 Net 3745.64

at Southampton. By whom built J. I. Thornycroft & Co. Yard No. 4108. When built.

ers. Khedival Mail Line. Port belonging to.

Engines made at Hazel Grove. By whom made Mirrlees Bickerton & Day Ltd. Engine No. 30102. When made 1947.

erators made at Dursley. By whom made Mawdsley Ltd. Generator No. 2608178. When made 1947.

of Sets One. Engine Brake Horse Power 225. M.N. as per Rule 56.25. Total Capacity of Generators 125. Kilowatts.

et 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.

imum pressure in cylinders 800 lbs per sq. inch. Diameter of cylinders 8 1/2". Length of stroke 13 3/4". No. of cylinders 5. No. of cranks 5.

n indicated pressure 115 lbs per sq. inch. 1, 3, 5, 4, 2. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 8 5/8".

ere a bearing between each crank Yes. Moment of inertia of flywheel 5700. Revolutions per minute 500.

wheel dia. 41 - 0". Weight 2200 lbs. Means of ignition Compression. Kind of fuel used Diesel Oil.

nk Shaft, dia. of journals as per Rule Approved. 5 3/4". Crank pin dia. 5 9/16". Crank Webs Mid. length breadth 8 1/2". Thickness parallel to axis.

wheel Shaft, diameter as per Rule Flywheel mounted on end of Crankshaft. Intermediate Shafts, diameter as per Rule. 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. Exhaust manifold watercooled.

ling Water Pumps, No. One 2000 G.P.H. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

ricating Oil Pumps, No. and size One 670 G.P.H.

Compressors, No. No. of stages. Diameters. Stroke. Driven by.

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

RECEIVERS:—Have they been made under Survey Yes. State No. of Report or Certificate C 5272.

ach 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.

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

h Pressure Air Receivers, No. Cubic capacity of each. Internal diameter. thickness.

mless, lap welded or riveted longitudinal joint. Material. Range of tensile strength. Working pressure by Rules.

rting Air Receivers, No. Total cubic capacity. Internal diameter. thickness.

mless, 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.

ssure of supply 225/230. volts. Full Load Current 550. Amperes. Direct or Alternating Current Direct.

lternating 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 Yes. is an adjustable regulating resistance fitted in series with each shunt field Yes.

all terminals accessible, clearly marked, and furnished with sockets. Yes. Are they so spaced.

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

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

the generators are 100 kw. or over have they been built and tested under survey Yes, Marked Lloyd's M.1734, 17.6.47.

ails of driven machinery other than generator.

ANS.—Are approved plans forwarded herewith for Shafting 11th June, 1946. Receivers. Separate Tanks.

ve Torsional Vibration characteristics if applicable been approved 18th November, 1946. Armature shaft Drawing No.

ARE 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.

Manufacturer.

Mirrlees Bickerton & Day Ltd
 Martin Chief Draughtsman

14. 9.

During progress of 1947. May 13, 21. July 11, 14.

Dates of Survey while building 1947. During erection on board vessel SEPT 3, 10, 17. NOV 4, 21, 24. DEC 10.

Total No. of visits 13. 13.5.47. 21.5.47. 21.5.47. 14.7.47. 21.5.47. 21.5.47.

Materials O.H. Steel. Tensile strength 48.8 Tons per sq. inch.

Crank shaft 25% Identification Marks LLOYD'S 1465 J.H.M. 21.5.

Identification marks on Air Receiver S.17784. LLOYD'S TEST. 790 lbs. W.P. 395 lbs. T.D.S. 164.47.

GENERAL REMARKS (State quality of workmanship, opinions as to class, etc.) This engine has been constructed under survey of tested materials in accordance with the Secretary's letters, approved plans and Rules of the Rules. Materials and workmanship are good and when tested in the shop under full load the engine showed satisfactory results. The torsional vibration characteristics 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.

Southernpton. This engine has been securely fitted on the vessel on the subplatform on the after end of port side. On completion of fitting on board the engine was examined under full working conditions with satisfactory results. Materials & Workmanship good. This engine is eligible in my opinion to be classed with the rest of the machinery and have the record of LMC 12.4.

The amount of Fee 8 : 8 : 9. Travelling Expenses (if any) 1 : 6 : 3.

Committee's Minute See F.E. Welch. vpt.

R. J. M. on Stone & G. White

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