

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 770.

Received at London Office

19 JUL 1952

Date of writing Report 7-7-1952. When handed in at Local Office 19-7-1952 Port of LEEDS.

No. in Survey held at Leeds. Date, First Survey 2-4-52. Last Survey 30-6-1952. Reg. Book.

Single on the Twin Triple Quadruple Screw vessel. No. "CALTEX DELHI". Number of Visits 6. Tons Gross 8527 Net 4808.

Built at Sunderland. By whom built Wm. Doxford & Sons. Yrd No. 788. When built 1951.

Client. Messrs. Wm. Doxford & Sons. Ship No. 788. Port belonging to London.

Oil Engines made at Leeds. By whom made J. & H. McLaren Ltd. Engine No. 50353 Contract No. 30856 When made 1952.

Generators made at Liverpool. By whom made Campbell & Isherwood Ltd. Generator Contract No. 47307 When made 1952.

No. of Sets 1. Engine Brake Horse Power 83. M.N. as per Rule 17. Total Capacity of Generators 50 Kilowatts.

Is Set intended for essential services.

OIL ENGINES, &c.—Type of Engines McLaren M.5 Mark I. 2 or 4 stroke cycle 4. Single or double acting S.A.

Maximum pressure in cylinders 900 lbs/sq.in. Diameter of cylinders 142 mm. Length of stroke 200 mm. No. of cylinders 5. No. of cranks 5.

Brake M.E. pressure 90 lbs/sq.in. Firing order in cylinders 1,3,5,4,2. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 178 mm.

Is there a bearing between each crank Yes. Moment of inertia of flywheel (16 m² or Kg.-cm.²) 750.

Flywheel dia. 2'-2 3/4". Weight 184 tons (Rim wt. only). Means of ignition Compression. Kind of fuel used Heavy Oil.

Crank Shaft, dia. of journals as per Rule approved. 85 mm. Crank pin dia. 85 mm. Crank Webs Mid. length breadth 200 mm. 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) 750.

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 No. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material.

Cooling Water Pumps, No. One Centrifugal. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

Lubricating Oil Pumps, No. and size One Gear Type.

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.

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.

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 Campbell & Isherwood No. 47307. Compound wound. Continuous rating. Drip Proof. LLOYD'S

Pressure of supply 110 volts. Full Load Current 455 Amperes. Direct or Alternating Current D.C. H.H.

Is 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

or 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.

PLANS.—Are approved plans forwarded herewith for Shafting 22-2-50. Receivers. Separate Tanks.

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

PARE GEAR As per Rule Requirements.

The foregoing is a correct description,

J. & H. McLAREN LTD.
ENGINEERS, LEEDS, 10

Manufacturer.



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Dates of Survey while building { During progress of work in shops - - 2-4-52, 27-5-52, 6-6-52, 12-6-52, 30-6-52, 5-6-62. During erection on board vessel - - - - - Total No. of visits 6

Dates of Examination of principal parts—Cylinders 27-5-52. 12-6-52. Covers 27-5-52. 2-4-52. Pistons 6-6-52. Piston rods -

Connecting rods 5-6-52. Crank and Flywheel shafts 2-4-52. Intermediate shafts -

Crank shaft { Material S.M. Steel Tensile strength 45 tons/sq. in. Elongation 22% Identification Marks 8915/6 L.R. J.4623 J.S. 19-2-52. 2-4-52. T.P.G.

Flywheel shaft, Material - Identification Marks -

Identification marks on Engine Air-Recovers LLOYD'S 50353 30-6-52. T.P.G.

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.)

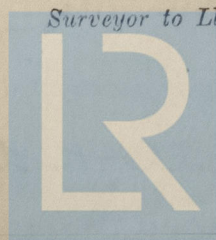
This heavy oil engine has been constructed under Special Survey in accordance with approved plans, Secretary's letters and the requirements of the Rules, The materials and workmanship are good, and the set was found satisfactory when tested in the shop under full load conditions, coupled to its generator. This unit is, in my opinion, suitable for installation in the vessel for which it is intended.

The amount of Fee ... £ 18 : 6 : 0 When applied for 8-7- 19 52 Travelling Expenses (if any) £ : 8 : 0 When received 19

Committee's Minute FRI, 26 SEP 1952 Assigned See F.F. mchey rpt Sld. 35873

Wm. J. Gibson

Surveyor to Lloyd's Register of Shipping.



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