

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Date of writing Report 18th Mar. 1954 When handed in at Local Office 23rd Mar. 1954. Port of MANCHESTER Received at London Office 29 MAR 1954

No. in Survey held at _____ Reg. Book. _____ Date, First Survey 9.7.53 Last Survey 17th Dec. 1953 Number of Visits 5

Single on the Twin Triple Quadruple Screw vessel MELKA. Tons Gross 20551 Net 12533

Built at Haverton Hill-on-Tees By whom built The Furness Shipbuilding Co. Ltd. (462) Yard No. 2737 When built 1954 Owners Gulf Oil Corporation Port belonging to MONROVIA

Oil Engines made at Ashton-u-Lyne By whom made National Gas & O.E. Co. Ltd. Engine No. 90475 When made 1953 Generators made at Birmingham By whom made General Electric Co. Ltd. Alternator O/N 46452/70 Generator No. ST14689/1 Marine Generator No. ST14690/1 When made 1953

No. of Sets 1 B.H.P. of each Set 198 M.N. as per Rule 40 Capacity of each Generator 100 Kilowatts. 3.9 Is Set intended for essential services EMERGENCY SET.

OIL ENGINES, &c. Type of Engines Vertical, Solid Injection, Heavy Oil or 4 stroke cycle 4 Single or double acting Single Maximum pressure in cylinders 950 PSI Diameter of cylinders 6" Length of stroke 8 1/2" No. of cylinders 8 No. of cranks 8

Mean indicated pressure 107 PSI Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 6 7/8" Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) 58,000 lbs in² & "Gear" Ring, balance wts. None fitted Revolutions per minute 900

Flywheel dia. 27 1/2" Weight 402 lbs. Means of ignition Compression Kind of fuel used Diesel Oil Crank Shaft, Semi built dia. of journals as per Rule approved with 2 1/2" hole offset Crank pin dia. 4.497" Crank Webs Mid. length breadth 7 1/2" Thickness parallel to axis shrunk as fitted 5.3075" Mid. length thickness 1 1/2" Thickness round eye hole _____

Flywheel Shaft diameter as per Rule Generator armature, moment of inertia (16 m² or Kg.-cm.²) 61,632 lbs in²

Are means provided to prevent racing of the engine 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 Manifold Water Cooled

Cooling Water Pumps, No. and how driven One - Fresh water Centrifugal type, Bevel gear Driven, Integral with Engine, 3000 GPH. 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 Integral with Engine - 625 GPH. Air Compressors, No. - No. of stages _____ Diameters _____ Stroke _____ Driven by _____

Scavenging Air Pumps or Blowers, No. _____ How driven _____

AIR RECEIVERS:—Have they been made under Survey (other than main engines) _____ State No. of Report or Certificate _____ State full details of safety devices _____

Can the internal surfaces of the receivers be examined and cleaned _____ 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 _____

Starting Air Receivers, No. _____ Total cubic capacity _____ Internal diameter _____ thickness _____

Seamless, lap welded or riveted longitudinal joint _____ Material _____ Range of tensile strength _____ Working pressure _____

ELECTRIC GENERATORS:—Type Drip proof screen protected type, Continuously rated, Revolving Field Pressure of supply 450 volts. Full Load Current 160 Amperes. Direct or Alternating Current Alternating

If alternating current system, state the periodicity 3 phase 60 cycles. 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 _____ and do the results comply with the requirements _____

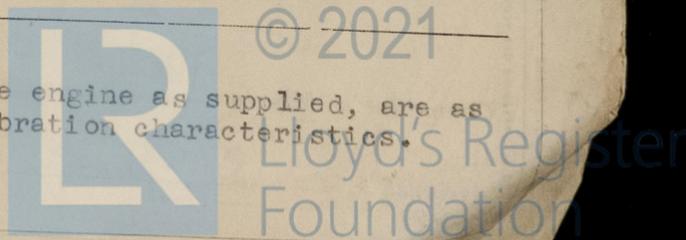
If the generators are 100 kw. or over have they been built and tested under survey Yes Details of driven machinery other than generator _____

PLANS.—Are approved plans forwarded herewith for Shafting 13.2.53. Receivers _____ Separate Tanks _____ (If not, state date of approval) Have Torsional Vibration characteristics if applicable been approved 24.3.53. Armature shaft Drawing No. M.28222 (State date of approval and name of previous duplicate case, if any) M.27755

As the spare gear required by the Rules been supplied As per Rule Requirements. T.J. CASE No 271 H

The foregoing is a correct description, and the particulars of the engine as supplied, are as approved for torsional vibration characteristics.

L. D. Eaton THE NATIONAL GAS AND OIL ENGINE CO. LTD. Manufacturer.



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