

4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 90

19 NOV 1951

Writing Report 20th Nov. 1951 When handed in at Local Office 1951 Port of Augsburg
 Received at London Office
 Survey held at Augsburg Date, First Survey 4th August, 51 Last Survey 10th Nov. 1951
 Number of Visits 24
 on the ^{Single} ~~Twin~~ ^{Triple} ~~Quadruple~~ screw vessel sister ship of "General Guisan" Nr.760 of the Shipyard v.d.Giessen
 Gross Tons
 Net Tons
 at Ysselmonde Krimpen ordered By whom ~~W.M. Scheeps-Instalatiebedrijf "Nederland"~~
~~W.M. Scheeps-Instalatiebedrijf "Nederland"~~
 Suisse Atlantic Lausanne Port belonging to
 Engines made at Augsburg By whom made Maschinenfabrik Augsburg-Nürnberg A.G. Engine 430524/
 Contract No. 525 When made 1951
 Motors made at By whom made Contract No. When made
 Sets 2 Engine Brake Horse Power 165 each M.N. as per Rule. Total Capacity of Generators Kilowatts.
 intended for essential services.

ENGINES, &c.—Type of Engines 2 x M.A.N. Standard Type G 4 V 33 A 2 or 4 stroke cycle 4 ✓ Single or double acting single
 Working pressure in cylinders 50 atm. Diameter of cylinders 220 mm ✓ Length of stroke 330 mm ✓ No. of cylinders 4 each ✓ No. of cranks 4 each ✓
 Indicated pressure 7.22 atm. Firing order in cylinders 1-3-4-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 260 mm
 Distance between bearings 260 mm Moment of inertia of flywheel (16 m² or Kg.-cm.²) 790 kg/m² Revolutions per minute 530 ✓
 Crank pin dia. 1200 mm Weight 780 kgs Means of ignition pre-chamber Kind of fuel used gas oil
 Shaft, dia. of journals as per Rule Crank pin dia. 130 mm ✓ Crank Webs Mid. length breadth 260 mm ✓ Thickness parallel to axis
 as fitted 130 mm ✓ Mid. length thickness 61 mm ✓ Thickness round eye-hole
 Crank Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule General armature, moment of inertia (16 m² or Kg.-cm.²)
 as fitted Means of lubrication forced. Kind of damper if fitted
 Means provided to prevent racing of the engine when declutched Are the exhaust pipes and silencers water cooled or lagged with non-conducting material
 Cylinders fitted with safety valves yes

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 1 x 3.6 m³/h each
 Compressors, No. No. of stages Diameters Stroke Driven by
 Suctioning Air Pumps, No. Diameter Stroke Driven by

RECEIVERS:—Have they been made under Survey yes Augsburg Report State No. of Report or Certificate (Df. C. 665/7.9.51)
 receiver, which can be isolated, fitted with a safety valve as per Rule yes
 internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces removal of covers
 a drain arrangement fitted at the lowest part of each receiver yes
 Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness
 Joints, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules
 Air Receivers, No. 1 Total cubic capacity 80 liters Internal diameter 250 mm thickness 8.5 mm
 Joints, lap welded or riveted longitudinal joint seamless Material S.M. Steel Range of tensile strength 61.8 kg/mm² Working pressure by Rules 30 atm

ELECTRIC GENERATORS:—Type
 Voltage of supply volts. Full Load Current Amperes. Direct or Alternating Current
 Regulating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown
 off Generators, are they compounded as per Rule is an adjustable regulating resistance fitted in series with each shunt field
 terminals accessible, clearly marked, and furnished with sockets Are they so spaced
 arranged that they cannot be accidentally earthed, short circuited, or touched Are the lubricating arrangements of the generators as per Rule
 Generators under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements
 Generators 100 kw. or over have they been built and tested under survey
 of driven machinery other than generator
 Approved plans forwarded herewith for Shafting 28.9.1948 Plan M 925 Receivers 8.2.1937 Separate Tanks
 (If not, state date of approval) final calculation will be sent to Rollo, next time Armature shaft Drawing No.
 Resonance Vibration characteristics if applicable been approved (state date of approval)

GEAR 5 Fuel oil pressure pipes, 1 safety valve, 3 Bosh - nozzles, 4 cylinder cover studs,
 6 main bearing bolts, 16 fitting bolts, 6 bottom end bearing bolts.

The foregoing is a correct description.
 Maschinenfabrik Augsburg-Nürnberg A.G.

A. K. K. K.
W. K. K. K.
 Manufacturer.



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 Foundation

5020-01900-50200

Dates of Survey while building
 During progress of work in shops - - Aug. 4. 6. 9. 13. 31. Sept. 3. 7. 10. 12. 14. 18. 26. Oct. 1. 3. 4. 5. 9.
 During erection on board vessel - - Nov. 7. 8. 10.
 Total No. of visits 24

Dates of Examination of principal parts—Cylinders 4.10.51. Covers 5.10.51. Pistons 31.8.51. Piston rods - -

Connecting rods 31.8.51. Crank and Flywheel shafts 12.9.51. Intermediate shafts - -

Crank shaft Material S.M. Steel Tensile strength 2088: top 53.7 bottom 53.7
 2089: 54.3 55.7
 Elongation 2088 top 34.8 % bottom 34.4 % Identification Marks Lloyd's No. 2088/7918 B
 on 50mm 2089 33.4 % 32.4 % H.K.S. 12.9.51.
 Flywheel shaft, Material Identification Marks Lloyd's No. 2089/7925 B
 H.K.S. 12.9.51.

Identification marks on Air Receivers 10886 / 2088, Lloyd's Test 60 atm.
 Work.Press. 30 atm. H.K.S. 7.9.51.

Is this machinery duplicate of a previous case - - If so, state name of vessel M.A.N. Standard Type

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These heavy oil auxiliary engines have been constructed under special survey in accordance with the approved plans and instructions thereto. The material used in the construction is good and the workmanship was found to be satisfactory.

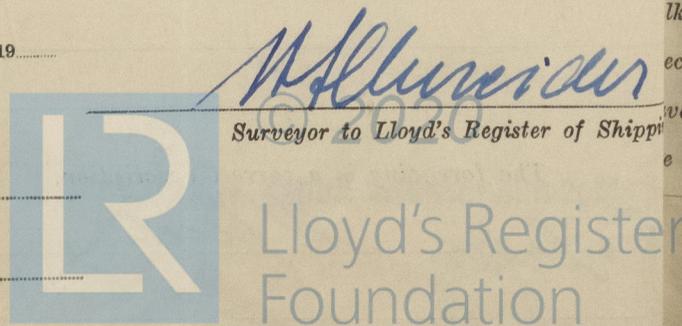
On makers test bed, these heavy oil auxiliary engines have been ^{tested} fitted running under full over- and partial loads with satisfactory results.

In my opinion, the vessel for which these heavy oil auxiliary engines are intended will be eligible for the notation of **L.M.C** (with date) when the whole machinery has been satisfactorily fitted aboard and tried under full working conditions.

Survey fee	JM	496.-
2x test cranksh.	JM	90.-
2x test bed trial	JM	80.-
1x test start air rec.	JM	20.-
1x test spare parts	JM	25.-
Expenses	JM	25.-
Total	JM	736.-

The amount of Fee ... £ : : When applied for 19
 Travelling Expenses (if any) £ : : When received 19

Committee's Minute TUES 9 DEC 1952
 Assigned Su F.E. moly. rpt. Ref 35543



5m. 1.48.-T. (MADE AND PRINTED IN ENGLAND)
 (The Surveyors are requested not to write on or below the space for Committee Minute.)