

4c.

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 90

Writing Report 20th Nov. 1951 When handed in at Local Office 19 Port of Augsburg  
 Survey held at Augsburg Date, First Survey 4th August, 51 Last Survey 10th Nov. 1951  
 on the Twin Screw vessel sister ship of "General Guisan" Nr. 760 of the Shipyard v.d. Giessen Number of Visits 24  
 at Ysselmonde Krimpen ordered By whom ~~De Nederlandsche Scheeps-Instalatiebedrijf "Nederland"~~ Port No. When built  
 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  
 um 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  
 ndicated 7.22 Firing order in cylinders 1-3-4-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 260 mm  
 pressure atm. a bearing between each crank yes Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 790 kg/m<sup>2</sup> Revolutions per minute 530  
 el dia. 1200 mm Weight 780 kgs Means of ignition pre-chamber Kind of fuel used gas oil  
 Shaft, dia. of journals as per Rule 130 mm Crank pin dia. 130 mm Mid. length breadth 260 mm Thickness parallel to axis  
 as fitted 130 mm Crank Webs 61 mm shrunk Mid. length thickness Thickness round eyehole  
 el Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)  
 as fitted Intermediate Shafts, diameter as fitted General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)  
 ans provided to prevent racing of the engine when declutched Means of lubrication forced Kind of damper if fitted  
 cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material  
 g Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
 ating Oil Pumps, No. and size 1 x 3.6 m<sup>3</sup>/h each  
 mpressors, No. No. of stages Diameters Stroke Driven by  
 ging Air Pumps, No. Diameter Stroke Driven by  
 RECEIVERS:—Have they been made under Survey yes Augsburg Report  
 receiver, which can be isolated, fitted with a safety valve as per Rule yes State No. of Report or Certificate (Df. C. 665/7.9.51  
 e 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  
 ressure Air Receivers, No. Cubic capacity of each Internal diameter thickness  
 s, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules  
 g Air Receivers, No. 1 Total cubic capacity 80 liters Internal diameter 250 mm thickness 8.5 mm  
 s, lap welded or riveted longitudinal joint seamless Material S.M. Steel Range of tensile strength 61.8 kg/mm<sup>2</sup> Working pressure by Rules 30 atm

TRIC GENERATORS:—Type  
 e of supply volts. Full Load Current Amperes. Direct or Alternating Current  
 ating 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  
 ed that they cannot be accidentally earthed, short circuited, or touched Are the lubricating arrangements of the generators as per Rule  
 nerators are under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements  
 nerators are 100 kw. or over have they been built and tested under survey  
 f driven machinery other than generator  
 Are 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.  
 rsional 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.

Manufacturer.



© 2020

Lloyd's Register  
Foundation

5020-01900-5020



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. Nov. 7. 8. 10. During erection on board vessel - - - - - . - . - . - . - . - . 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 eg. Elongation 2088 top 34.8 % bottom 34.4 % Identification Marks Lloyd's No. 2088/7918 B H.K.S. 12.9.51. on 50mm 2089 33.4 % 32.4 % Identification Marks Lloyd's No. 2089/7925 B H.K.S. 12.9.51. Flywheel shaft, Material Identification Marks

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.

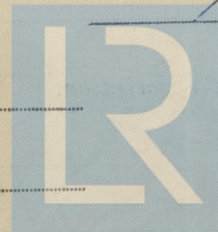
On makers test bed, these heavy oil auxiliary engines have been <sup>tested</sup> fitted running under full over- and partial loads with satisfactory results.

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

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



Surveyor to Lloyd's Register of Shipping  
Lloyd's Register Foundation