**Rpt. 4c**

Date of writing report 1st September, 1959 | Received London - | Port of Augsburg | No. 1291

Survey held at Augsburg | No. of visits 16 | First date 27th May | Last date 20 th August, 1959

# FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship - (Or Contract No. if name unknown). Owners - (Or Consignees)

Ship Built at Papenburg/Ems by Jos.L.Meyer when 1959 Yard No. 498

Auxiliary Engines ~~or Gas Turbines~~ made at Augsburg by M.A.N. A.G. when 1959 Eng. Nos 301 867-869

Total No. of sets and description (including type name) 3 x W8V17.5/22A

**INTERNAL COMBUSTION RECIPROCATING ENGINES.** No. of cylinders per engine 8 Dia. of cylinders 175 mm Stroke 220 mm 2 or 4 stroke cycle 4 Maximum approved BHP 214 at 750 RPM Corresponding MIP 7.71 kg/cm² Maximum pressure 60kg/cm² Fuel Diesel Oil Are cylinders arranged in Vee or other special formation? - If so, No. of crankshafts per engine - Is engine of opposed piston type? - No. and type of mechanically driven scavenge pumps or blowers per engine - No. of exhaust gas driven blowers or superchargers per engine - Is welded construction used for: Bedplate? - Entablature? - Total internal volume of crankcase (if 20 cu. ft. or over) 0.665 m³ No. and total area of crankcase explosion relief devices 2; 80cm² each Are flame guards or traps fitted? - Cooling medium for: Cylinders water Pistons - No. of attached pumps: F.W. cooling - S.W. cooling - Lubricating oil 1 How is engine started? by air 5.1 m³/h

**SHAFTING.** Is a damper or detuner fitted? yes No. of main bearings 9 Are bearings of ball or roller type? - Distance between inner edges of bearings in way of cranks 250 mm Crankshaft: ~~Built, semi-built~~, solid. Material of crankshaft S.M.Steel, 34CrMo4 Approved minimum tensile strength 80 kg/mm² Dia. of pins 195 mm Journals 195 mm Breadth of webs at mid throw 178 mm Axial thickness 42 mm If shrunk, radial thickness around eyeholes - Dia. of flywheel 800 mm Weight 520 kgs. Are balance weights fitted? yes Total weight 40 kgs. Rad. of gyration 14 cm Dia. of flywheel shaft - Base 454.Y Has each engine been tested in shop? yes How long at full power? 5 hours Was it tested with driven machinery attached? yes Was the governing tested and found satisfactory? yes Date of approval of torsional vibration characteristics (for engines of 150 BHP and over) 21.9.1959 Date of approval of shafting 9.2.49 Identification marks on shafting LLOYD'S AUG AB 35/584 H.K.S. 10.12.54 LLOYD'S AUG AB35/586 HKS 10.12.54 LLOYD'S AUG AB38/588 H.K.S. 13.12.57 Particulars of driven machinery 230V; 750 RPM; 120 kW;

Port and No. of Certificate for Starting Air Receivers 1 x 125 ltrs. Report No. 59/1713

10.11.59

**AUXILIARY GAS TURBINES.** BHP per set At RPM of output shaft. Open or closed cycle?

Arrangement of turbines. (A small diagram should be attached showing gas cycle) HP drives at RPM HP gas inlet temp. pressure IP " at " IP " " " " LP " at " LP " " " "

No. of air compressors per set Centrifugal or axial flow type? Material of turbine blades Material of compressor blades No. of air coolers per set No. of heat exchangers per set How are turbines started? Are the turbines operated in conjunction with free piston gas generators? Total No. of free piston gas generators Dia. of working pistons Dia. of compressor pistons No. of double strokes per minute at full power Gas delivery pressure Gas delivery temperature Have the turbines and attached equipment been tested in shop? How long at full power? Were they tested with driven machinery attached? Particulars of gearing Particulars of driven machinery Date of approval of plans Identification marks

**ELECTRIC GENERATORS.** Port and No. of Certificate for generators of 100 Kw. and over Köln certificates 59/688/686 For generators under 100 Kw., has Makers' Certificate been obtained? Are Certificates attached?

The foregoing description is correct and the particulars are as approved for torsional vibration characteristics (strike out words not applicable)

Maschinenfabrik Augsb.-Nürnberg A.G.

Manufacturer

Is this machinery duplicate of a previous case? - If so, which? -

**GENERAL REMARKS.** State if the machinery has been constructed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

These heavy oil auxiliary engines have been constructed under special survey in accordance with the requirements of the Rules and otherwise with the approved plans. The material used was tested and the workmanship was found satisfactory. The engines were tested running on makers' test bed under full-, over-, and partial loads with satisfactory results. In my opinion the engines can be recommended for the notation ✠ LMC (with Date) when the whole machinery has been satisfactorily fitted on board and tried under full working conditions.

~~Found. frame 120.-~~
Survey Fee DM 825.-
Running test 300.-
Expenses 30.- DM 1.155.-

Date when a/c rendered 8.10.1959

Engineer Surveyor to Lloyd's Register

Declaration to be signed by Surveyor at fitting-out Port:— The above described machinery has been fitted on board the under full working conditions. at in a proper manner and found satisfactory when tested on the (date)

Engineer Surveyor to Lloyd's Register

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015213-015223-0076