"~~WATAB~~"
"WATUDAMBO"

24 DEC 1959

Rpt. 4c

Date of writing report 26th November, 1959 Received London - Port of Augsburg No. 1321

Survey held at Augsburg No. of visits 13 First date 9th September Last date 9th October, 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.* 499

Auxiliary Engines or ~~Gas Turbines~~ made at Augsburg *by* Maschinenfabrik Augsburg-Nürnberg A.G. *when* 1959 *Eng. Nos.* 301 870-872

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* 7.71kg/cm² *Maximum pressure* 60 kg/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; 80 cm² 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 5.1 m³/h *How is engine started?* by air

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* 105 mm *Journals* 105 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* 140 mm *Dia. of flywheel shaft* - *Has each engine been tested in shop?* yes *How long at full power?* 5 hrs. *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* 9.2.1949 *Identification marks on shafting* LLOYD'S AUG AG48/592 HKS 31.8.59 C10850; LLOYD'S AUG AE1/702 GFi 5.9.59 912431; LLOYD'S AUG AE1/703 GFi 5.9.59 912432 *Particulars of driven machinery* 230 volts; 120 kW; 750 RPM

Case 4547

Port and No. of Certificate for Starting Air Receivers 1 x 125 ltrs. Augsburg Report No. 59/2404

29/1/60

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

Arrangement of turbines. *HP drives* *at* *RPM* *HP gas inlet temp.* *pressure*

(A small diagram should be attached showing gas cycle) *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*

Date of approval of plans *Identification marks* *Particulars of driven machinery*

ELECTRIC GENERATORS. *Port and No. of Certificate for generators of 100 Kw. and over* Köln certificates: 59/686, 687

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? yes *If so, which?* Yard No. 498

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 andotherwise 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 ✠ L.M.C. (with date) when the whole machinery has been satisfactorily fitted on board and tried under full working conditions.

frame 120.-
Survey Fee DM 825.-
g test 300.-
Expenses 45.- Total DM 1.290.-

Date when a/c rendered 11.12.1959

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 *at* *in a proper manner and found satisfactory when tested on the (date)* *under full working conditions.*

Engineer Surveyor to Lloyd's Register

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