~~WATAB~~ "WATUDAMBo"

21 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 - Owners (Or Consignees) -
(Or Contract No. if name unknown).
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 7.71 kg/cm^2 Maximum pressure 60 kg/cm^2 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 m^3 No. and total area of crankcase explosion relief devices 2; 80 cm^2 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 m^3/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/mm^2 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
IP " at " IP " " " "
(A small diagram should be attached showing gas cycle) 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)

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.

nd.frame 120.-
Survey Fee DM 825.-
ning 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 under full working conditions. at in a proper manner and found satisfactory when tested on the (date)

Engineer Surveyor to Lloyd's Register

Lloyd's Register Foundation