

Rpt. 4c

4 JAN 1960

Date of writing report 13th August, 1958

Received London

12 SEP 1958

Port of Augsburg

No. 1141

Survey held at Munich

No. of visits three

First date 9th June

Last date 17th July, 1958

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

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

Ship Built at Trieste by Cantiere Riuniti dell' when 1958 Yard No. 1841

Auxiliary Engines of Gas Turbines made at Munich by Südd. Bremsen AG. Adriatico when 1958 Eng. Nos. 95917

Total No. of sets and description (including type name) TR HS518 A supercharged

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 2 Dia. of cylinders 140 mm Stroke 180 mm 2 or 4 stroke cycle 4 Maximum approved BHP 255 at 1200 RPM Corresponding MIP 7.78 kg/cm2 Maximum pressure 25 kg/cm2 Fuel Diesel oil Are cylinders arranged in Vee or other special formation? no If so, No. of crankshafts per engine - Is engine of opposed piston type? no No. and type of mechanically driven scavenge pumps or blowers per engine - No. of exhaust gas driven blowers or superchargers per engine 1 Is welded construction used for: Bedplate? no Entablature? - Total internal volume of crankcase (if 20 cu. ft. or over) - No. and total area of crankcase explosion relief devices - Are flame guards or traps fitted? - Cooling medium for: Cylinders water Pistons - No. of attached pumps: F.W. cooling 1 S.W. cooling - Lubricating oil 1 How is engine started? by air

SHAFTING. Is a damper or detuner fitted? yes No. of main bearings 2 Are bearings of ball or roller type? no Distance between inner edges of bearings in way of cranks 176 mm Crankshaft Built semi-built, solid Material of crankshaft 37Cr4, SM Steel Approved minimum tensile strength 85 kg/mm Dia. of pins 100 mm Journals 115 mm Breadth of webs at mid throw 152 mm Axial thickness 32 mm If shrunk, radial thickness around eyeholes - Dia. of flywheel 590 mm Weight 103 kgs Are balance weights fitted? yes Total weight 31.2 kg Rad. of gyration 106.5 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? no Was the governing tested and found satisfactory? yes Date of approval of torsional vibration characteristics (for engines of 150 BHP and over) 20.11.57 397 F. Date of approval of shafting 28.4.55 Identification marks on shafting LLOYD'S AUG AB 48/662 852 646 HKS 13.1.58 Particulars of driven machinery

Port and No. of Certificate for Starting Air Receivers Köln Certificate No. 56/401 No. 12 - 8423

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 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) SÜDDEUTSCHE BREMSSEN AG., MÜNCHEN Manufacturer

Is this machinery duplicate of a previous case? yes If so, which? yard Nos. 1839 and 1840

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. This heavy oil auxiliary engine has been constructed under special survey in accordance with the requirements of the Rules and otherwise with the approved plans. The material used in the construction was tested and the workmanship was found satisfactory. The engine was tested running on makers' test bed under full-, over-, and partial loads with satisfactory results. In my opinion the engine can be recommended for the notation L.M.C. (with date) when the whole machinery has been satisfactorily fitted on board.

Survey Fee DM 325.- Expenses 100.- Total DM 450.- Date when a/c rendered 29.8.1958

G. Trische 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 "Esso Liverpool" C.R.D.A. YARD NO 1841 at MONFALCONE in a proper manner and found satisfactory when tested on the (date) 26/10/1958 under full working conditions.

R. A. Rosebull Engineer Surveyor to Lloyd's Register

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AGE 96