B JUL 1960

Rpt. 4c

Date of writing report 12th Oct. 1959 Received London – Port of Augsburg No. 1314

Survey held at Munich No. of visits two First date 11th Sept. Last date 6th Oct. 1959

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

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

Ship Built at Trieste/Italy by Cant. Riuniti dell'Adriatico when 1959 Yard No. 1849

Auxiliary Engines ~~or Gas Turbines~~ made at Munich by Süddeutsche Bremsen AG. when 1959 Eng. Nos. 96 867

Total No. of sets and description (including type name) TRHS 518 A supercharged

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 8 Dia. of cylinders 140 mm Stroke 180 mm

2 or 4 stroke cycle 4 Maximum approved BHP 255 at 1200 RPM Corresponding MIP 10,5 kg/cm² Maximum pressure 60 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 one Is welded construction used for: Bedplate? no Entablature? no 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 fresh 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 9 Are bearings of ball or roller type? no Distance between inner edges of bearings in way of cranks 136 mm Crankshaft: ~~Built, semi-built~~, solid. Material of crankshaft 37 Cr 4 SM Steel Approved minimum tensile strength 85 kg/mm² Dia. of pins 110 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 – base 456 G

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) 19.10.1959

Date of approval of shafting 8.9.58 Identification marks on shafting LLOYD'S AUG AG 21 G.Fi. 8.7.59 C 4727/455

Particulars of driven machinery –

Port and No. of Certificate for Starting Air Receivers none.

13.1.60

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
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 BREMSEN AG! MÜNCHEN
Manufacturer

Is this machinery duplicate of a previous case? no 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.

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 and tried under full working conditions.

frame 40.-
Survey Fee DM 325.-
ng test 100.-
Expenses 25.- Total DM 490.-
Date when a/c rendered 30.10.1959

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 "Esso DUBLIN" C.R.D.A. YARD No 1849 at MONFALCONE in a proper manner and found satisfactory when tested on the (date) 11/5/60 under full working conditions.

Engineer Surveyor to Lloyd's Register

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