Rpt. 4c

MONDAY 2 MAR 1959

Date of writing report 10th February 58 — Received London – — Port of Augsburg — No. 1062

Survey held at Augsburg — No. of visits 12 — First date 14th Nov.57 Last date 22nd January,58

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

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

Ship Built at Gävle/Sweden by Gävle Varv A/B when 1957/58 Yard No. 99

Auxiliary Engines ~~or Gas Turbines~~ made at Augsburg by Messrs. M.A.N. AG. when 1957/58 Eng. Nos. 301 320/321

Total No. of sets and description (including type name) 2 x W6V 14/18

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 6 Dia. of cylinders 140 mm Stroke 180 mm

2 or 4 stroke cycle 4 Maximum approved BHP 120 at 1000 RPM Corresponding MIP 7,9kg/cm² Maximum pressure 60 kg/cm²

Fuel Gas 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 – Is welded construction

Used for: Bedplate? – 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? no Cooling medium for: Cylinders water

Pistons – No. of attached pumps: F.W. cooling 1 10 m³/h S.W. cooling 1 10 m³/h Lubricating oil 1 4,3 m³/h How is engine started? by air

SHAFTING. Is a damper or detuner fitted? yes No. of main bearings 8 Are bearings of ball or roller type? no Distance between

inner edges of bearings in way of cranks 210 mm Crankshaft: ~~Built, semi-built~~ solid. Material of crankshaft SM Steel 34CrMo4 Approved

minimum tensile strength 80 kg/mm² Dia. of pins 90 mm 20 mm TYPING ERROR? Journals 90 mm Breadth of webs at mid throw 145 mm Axial

thickness 39 mm If shrunk, radial thickness around eyeholes – Dia. of flywheel 600 mm Weight 225 kgs. Are balance

weights fitted? yes:6 Total weight 30,30 kgs Rad. of gyration 90 mm Dia. of flywheel shaft –

Has each engine been tested in shop? yes How long at full power? 5 h 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) 6.8.57 /less than 150 BHP

Date of approval of shafting 20.5.52 General approval Identification marks on shafting LLOYD'S DSF 466 H.S. 31.10.57

Particulars of driven machinery LLOYD'S DSF 465 H.S. 31.10.57

Port and No. of Certificate for Starting Air Receivers 1 x 55 ltrs. Augsburg Certificate No. 58/314

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? yes Are Certificates attached? no. Hamburg Nos. 4033 5.12.57, 4022 3.12.57

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

Maschinenfabrik Augsburg-Nürnberg A.G.

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.*

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 in the construction is good 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 engine can be recommended for the notation ✠ L.M.C. (with date) when the whole machinery has been satisfactorily fitted on board.

Fixed trial 80.-
Survey Fee DM 350.-
Time frame 80.-
Expenses 50.- Total DM 560.-

Date when a/c rendered 28.2.1958

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 M/S "PAMIR" (YARD NR 99) in a proper manner and found satisfactory when tested on the (date) 12.12.58. under full working conditions.

Engineer Surveyor to Lloyd's Register

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