Rpt. 4c

Date of writing report 30th Oct., 1958 Received London -- Port of Augsburg No. 21180

Survey held at Augsburg No. of visits 12 First date 7th July, 58 Last date 23rd Sept., 1958

27 NOV 1958

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

28 OCT 1959

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

Ship Built at Gävle / Sweden *by* Gävle Varv A/B *when* 1958 *Yard No.* 101

Auxiliary Engines ~~or Gas Turbines~~ *made at* Augsburg *by* M. A. N. - AG. *when* 1958 *Eng. Nos.* 301409/410

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* 8,12 kg/cm^2 *Maximum pressure* 60 kg/cm^2 *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. 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?* -- *Cooling medium for: Cylinders* water *Pistons* -- *No. of attached pumps: F.W. cooling* 1 (8 m^3/h) *S.W. cooling* 1 (8,5 m^3/h) *Lubricating oil* 1 (4,3 m^3/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?* --- *Distance between inner edges of bearings in way of cranks* 160 mm *Crankshaft: Built or ~~forged~~ solid.* *Material of crankshaft* SM Steel; 34CrMo4 *Approved minimum tensile strength* 80 kg/mm^2 *Dia. of pins* 90 mm *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* 130 kgs. *Are balance weights fitted?* yes *Total weight* 30 kgs. *Rad. of gyration* 123 mm *Dia. of flywheel shaft* --
Has each engine been tested in shop? yes *How long at full power?* 4 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)* not applicable
Date of approval of shafting 19.5.52 *Identification marks on shafting* LLOYD'S DSF 460 H.S. 26.9.57 41414
Particulars of driven machinery -- " " 41414 H.S. 26.9.57 459

Port and No. of Certificate for Starting Air Receivers Augsburg Report No. 58/1714

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 approximately correct and the tests (if any) are applicable~~

Maschinenfabrik Augsb.-Nürnberg A. G.
Manufacturer

Is this machinery duplicate of a previous case? yes *If so, which?* Yard Nos. 99, 100

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 was tested and the workmanship was found satisfactory. 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.

Survey Fee DM 350.-
Expenses 200.- 20.- Total DM 570.-
Date when a/c rendered 21.11.1958

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

Engineer Surveyor to Lloyd's Register

PLEASE RETURN THIS REPORT WITH YOUR FIRST ENTRY.

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