28 JAN 1960
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Rpt. 4c

Date of writing report 24th March, 1959 Received London – Port of Augsburg No. 1241

Survey held at Augsburg No. of visits 20 First date 16th Oct. 58 Last date 13th Febr. 1959

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship – Owners (Or Consignees) Export to U.S.S.R.
(Or Contract No. if name unknown).
Ship Built at Gävle/Sweden by Gävle Varv A/B when 1959 Yard No. 102
Auxiliary Engines ~~or Gas Turbines~~ made at Augsburg by M. A. N. AG. when 1958/59 Eng. Nos. 401 724-26
Total No. of sets and description (including type name) 3 x G5V 23,5/33A

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 5 Dia. of cylinders 235 mm Stroke 320 mm 330 see letter 13/5/59
2 or 4 stroke cycle 4 Maximum approved BHP 255 at 600 RPM Corresponding MIP 6,9 kg/cm² Maximum pressure 57 kg/cm² If so, No. of
Fuel gas oil Are cylinders arranged in Vee or other special formation? – No. and type of mechanically driven scavenge pumps or blowers
crankshafts per engine – Is engine of opposed piston type? – Is welded construction
per engine – No. of exhaust gas driven blowers or superchargers per engine – No. and total area of
used for: Bedplate? – Entablature? – Total internal volume of crankcase (if 20 cu. ft. or over) 1,120 m³
crankcase explosion relief devices 2; 81 cm² 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 How is engine started? by air
4,3 m³/h

SHAFTING. Is a damper or detuner fitted? yes No. of main bearings 6 Are bearings of ball or roller type? – Distance between
inner edges of bearings in way of cranks 284 mm Crankshaft: ~~Built, semi-built~~, solid. Material of crankshaft SM Steel C.40 Approved
minimum tensile strength 55 kg/cm² Dia. of pins 152 mm Journals 152 mm Breadth of webs at mid throw 273 mm Axial
thickness 73,5 mm If shrunk, radial thickness around eyeholes – Dia. of flywheel 1200 mm Weight 1100 kg Are balance
weights fitted? no Total weight – Rad. of gyration – 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) 23.4.1958 base 412 L
Date of approval of shafting 19.8.55 Identification marks on shafting LLOYD'S AUG 3008/1410 C 11.11.58 G.H.
3009/645 B 11.11.58 G.H.
Particulars of driven machinery 200 KVA; 66 Amps; 120 3010/1455 B 11.11.58 G.H.
7.V.59
Port and No. of Certificate for Starting Air Receivers No. 15592; Augsburg Rpt. 59/446

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)
Maschinenfabrik Augsb.-Nürnberg A. G.
Manufacturer

Is this machinery duplicate of a previous case? yes If so, which? Yard Nos. 100/101

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 aux. engines have been constructed under special survey in accordance with the requirements and otherwise with the approved plans. The material used in the construction was tested and the workmanship to be 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 ✠ LMC (with date) when the whole machinery has been satisfactorily fitted on board and tried under full working conditions.

d.frame 120.-
Survey Fee 975.-
ing test 300.-
kshaft 30.-
Expenses 165.- Total DM 1 590.-
Date when a/c rendered 3. 4. 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

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