

Rpt. 4c

16 JUN 1961

Date of writing report 29.4.61, Received London, Port Rijeka, No. 1208, Survey held at Karlovac, No. of visits 8, First date 13.7.60, Last date 31.3.61.

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship, Contract No. 127/59, Owners, Ship Built at Rijeka by Brodogradiliste 3. Maj when, Yard No. 480, Auxiliary Engines or Gas Turbines made at Karlovac by Jugoturbina when 1961, Eng. Nos. M-271, Total No. of sets and description (including type name) One set Jugoturbina-Sulzer-type 5BAH22

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 5, Dia. of cylinders 220 mm, Stroke 320 mm, 2 or 4 stroke cycle 4, Maximum approved BHP 300 at 500 RPM, Corresponding MIP 11 kg/sq. cm, Maximum pressure 60-62 kg/sq. cm, Fuel Marine Diesel oil, Are cylinders arranged in Vee or other special formation? In line, If so, No. of crankshafts per engine one, Is engine of opposed piston type? no, No. and type of mechanically driven scavenge pumps or blowers per engine none, 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) 1.730 cu. m, No. and total area of crankcase explosion relief devices 5x0.0652, Are flame guards or traps fitted? no, Cooling medium for: Cylinders fresh water, Pistons no cooling, No. of attached pumps: F.W. cooling none, S.W. cooling none, Lubricating oil one, How is engine started? compressed air of 30 kg/sq. cm pressure

SHAFTING. Is a damper or detuner fitted? no, No. of main bearings 6, Are bearings of ball or roller type? no, Distance between inner edges of bearings in way of cranks 245 mm, Crankshaft: Built, semi-built, solid, Material of crankshaft MF Steel, Approved minimum tensile strength 50 kg/sq. cm, Dia. of pins 145 mm, Journals 155 mm, Breadth of webs at mid throw 280 mm, Axial thickness 64 mm, If shrunk, radial thickness around eyeholes no, Dia. of flywheel 1250 mm, Weight 1250 kg, Are balance weights fitted? no, Total weight, Rad. of gyration, Dia. of flywheel shaft 155 mm, Has each engine been tested in shop? yes, How long at full power? 6 hours, 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) 4.10.60, 20.10.60, 18.11.60, Date of approval of shafting, Identification marks on shafting Lloyd's Rka. No. 6073 - 13.7.60, Particulars of driven machinery Bude Koncar AC Self Exciting Generator SC 1006-12 of 250 KW, No. 11643, Lloyd's Rka. No. 8104 - 22.2.61.

Port and No. of Certificate for Starting Air Receivers

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, IP, at, LP, at, No. of air compressors per set, Centrifugal or axial flow type?, Material of turbine 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?, JUGOTURBINA, Tvornica parnih turbina i dizel motora, KARLOVAC 6

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

Is this machinery duplicate of a previous case? Yes, If so, which? Rpt. No. 1191

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. The auxiliary engine referred herein has been constructed under Special Survey in accordance with the Rules of the Society's approved plans and Secretary letters. The material and workmanship was good. Upon completion of assembly the engine was examined under full working condition on the test bed with satisfactory results and is in my opinion suitable to be installed on ship classed by the Society.

Survey Fee 22-0-0 + 46200.-Din, Expenses 6699.-Din, Late attendance 3528.-Din, Date when a/c rendered, (J. Racki) 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)

