

Rpt. 4c

128 MAY 1958

Date of writing report 7/5/58

Received London 31 MAR 1958

Port VALENCIA

No. 869

Survey held at Manises, Valencia

No. of visits 12

First date 14-1-58

Last date 2-5-58

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship BOMIFAZ Owners (Or Contract No. if name unknown) Ship Built at Cadiz by Astilleros de Cadiz, S.A. when 1958 Yard No. T-7 Auxiliary Engines or Gas Turbines made at Manises, Valencia by Empresa Nacional "Elcano" when 1958 Eng. Nos. MA-105-106 & Total No. of sets and description (including type name) Three heavy oil engines Elcano-Gotaverken type DM 300/450 583

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 3 Dia. of cylinders 300 mm. Stroke 450 mm. 2 or 4 stroke cycle 4 Maximum approved BHP 184 at 350 RPM Corresponding MIP 6.6 Kg/cm2 Maximum pressure 49 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 None No. of exhaust gas driven blowers or superchargers per engine None Is welded construction used for: Bedplate? No Entablature? No Total internal volume of crankcase (if 20 cu. ft. or over) 2.6 m3 No. and total area of crankcase explosion relief devices 3 - 398 cm2 Are flame guards or traps fitted? Yes Cooling medium for: Cylinders Sea water Pistons None No. of attached pumps: F.W. cooling None S.W. cooling None Lubricating oil one How is engine started? compressed air

SHAFTING. Is a damper or detuner fitted? No No. of main bearings 4 Are bearings of ball or roller type? No Distance between inner edges of bearings in way of cranks 397 mm. Crankshaft: cast-iron, solid Material of crankshaft: elec. furnace steel Approved minimum tensile strength 44 Kg/mm2 Dia. of pins 190 mm. Journals 190 mm. Breadth of webs at mid throw 290 mm. Axial thickness 105 mm. If shrunk, radial thickness around eyeholes - Dia. of flywheel 1500 mm. Weight 3800 Kgs. Are balance weights fitted? No Total weight - Rad. of gyration - Dia. of flywheel shaft None Has each engine been tested in shop? Yes How long at full power? 8 hours Was it tested with driven machinery attached? Yes governing tested and found satisfactory? Yes Date of approval of torsional vibration characteristics (for engines of 150 BHP and over) 13/11/56 363F Date of approval of shafting 13/11/56 Identification marks on shafting Crankshafts - Lloyd's Bbo. No 4331, 4329 & 4328 Particulars of driven machinery Dynamo, 125 Kw, 110 volt, 1136 amps. Maker Construcciones Electricas Sabadell - No E2117 25-10-57 P.A. Bel. - No E2116 25-10-57 P.A. Bel. & No E2071 28-9-57 P.A. Bel. Port and No. of Certificate for Starting Air Receivers None

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 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 Barcelona, No 2117, 2116 & 2071 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) EMPRESA NACIONAL "ELCANO" FACTORIA DE MANISES EL DIRECTOR Manufacturer Firmado: FERNANDO BRULLA

Is this machinery duplicate of a previous case? Yes If so, which? MA-125 Minimum ultimate tensile strength of crankshaft coupling bolts 58.5 Kgs/mm2.

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 auxiliary oil engines have been built under Special Survey in accordance with the Rules, approved plans and Secretary's letters. The materials and workmanship are good. Shop trials under full power working conditions and 10% overload carried out with satisfactory results. These engines in our opinion are entitled to be classed +LMC when fitted on board to the Surveyors' satisfaction.

Survey Fee Pts. 11,670 Expenses Pts. 2,500 Date when a/c rendered 23/5/58 J. J. Wren H. H. Wren - sur. J. J. Wren - sur. 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 MOTOR TANKER BOMIFAZ at CADIZ in a proper manner and found satisfactory when tested on the (date) 15.5.58 under full working conditions.

Register Foundation 004866-004872-2019