Rpt. 4c

Date of writing report 28.10.58 Received London ..... Port BILBAO No. 12426

Survey held at Santander No. of visits 2 First date 8.7.58 Last date 21.7.58

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship (Or Contract No. if name unknown) M/S "JOSELIN" Owners (Or Consignees) J.M. Pombo Romero-Robledo

Ship Built at Santander by Corcho Hijos S.A. when 1958 Yard No. 71

Auxiliary Engines ~~or Gas Turbines~~ made at Detroit Mich.USA by General Motor Corp. when - Eng. Nos. 67170193 57079388

Total No. of sets and description (including type name) Two heavy oil. Model 671.LA 24

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 6 Dia. of cylinders 108 m/m Stroke 127 m/m

2 or 4 stroke cycle 2 Maximum approved BHP 120 at 1500 RPM Corresponding MIP - Maximum pressure 73,5 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 one rotary type 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) - No. and total area of crankcase explosion relief devices Not required ~~Are flame guards or traps fitted?~~ Cooling medium for: Cylinders F. Water Pistons None No. of attached pumps: F.W. cooling 1 S.W. cooling None Lubricating oil 1 How is engine started? Elec. battery and by hand

SHAFTING. Is a damper or detuner fitted? No No. of main bearings 7 Are bearings of ball or roller type? No Distance between inner edges of bearings in way of cranks 116 m/m Crankshaft: ~~Built, semi built,~~ solid. Material of crankshaft Special Steel Approved minimum tensile strength 78 Kg/mm2. Dia. of pins 69,8 mm. Journals 88,8 mm. Breadth of webs at mid throw 117 m/m. Axial thickness 25,4 mm. ~~If shrunk, radial thickness around cycloles~~ Dia. of flywheel Not available Weight - Are balance weights fitted? Yes Total weight Approx.5Kgs Rad. of gyration Aprrox.75mm. Dia. of flywheel shaft None Has each engine been tested in shop? Not-here How long at full power? - Was it tested with driven machinery attached? Yes on board Was the governing tested and found satisfactory? Yes Date of approval of torsional vibration characteristics (for engines of 150 BHP and over) Not required Date of approval of shafting 25.4.58. Identification marks on shafting Not stamped Particulars of driven machinery Generator of 75 Kw Nos 54166 & 54338.

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. (Small diagram should be attached showing gas cycle) 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 None

For generators under 100 Kw., has Makers' Certificate been obtained? Yes Are Certificates attached? Yes to Electrical Rpt.

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? "MIGUELIN POMBO"

GENERAL REMARKS. State if the machinery has been constructed under special survey in accordance with the Rules, approved plans and Secretary's letters. The quality of materials and workmanship. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

These engines have not been constructed under Special Survey but completely dismantled, examined and found in order. Materials and workmanship appear ggod, Crankshaft Brinell tested 84 Kgs/mm. at journals, Engines were tested on board under full power working conditions 4 hours satisfactorily. These auxiliary engines in my opinion are eligible to be included in the machinery classification of the vessel.

Survey Fee 3.000 Ptas.
Expenses .....
when a/c rendered 31 x 58

Engineer Surveyor to Lloyd's Register

Certification to be signed by Surveyor at fitting-out Port:— The above described machinery has been fitted on board the M.V. JOSELIN. at Santander in a proper manner and found satisfactory when tested on the (date) 21-7-58 under full working conditions.

Engineer Surveyor to Lloyd's Register

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