

Date of writing report 16th April, 1959

Received London

Port

No.

Survey held at TURIN

No. of visits

In shops 32

First date

Last date

On vessel

6/6/58

3/4/59

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. - Name **Messrs. BRODOGRADILISTE - SPLIT** YARD No. 152. Gross tons -

Owners - Managers - Port of Registry - Year Month

Hull built at **Split (Jugoslavia)** By **Messrs. Brodogradiliste Split** Yard No. 152 When -

Main Engines made at **Turin** By **S.A. FIAT - S.G.M.** Eng. No. 4341 When 1959

Gearing made at - By -

Donkey boilers made at - By - Blr. Nos. - When -

Machinery installed at - By - When -

Particulars of restricted service of ship, if limited for classification -

Particulars of vegetable or similar cargo oil notation, if required -

Is ship to be classed for navigation in ice? - Is ship intended to carry petroleum in bulk? -

Is refrigerating machinery fitted? - If so, is it for cargo purposes? - Type of refrigerant -

Is the refrigerating machinery compartment isolated from the propelling machinery space? - Is the refrigerated cargo installation intended to be classed? -

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the wording is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines **one** No. of propellers **one** Brief description of propulsion system **One oil engine directly coupled to the intermediate shaft.**

MAIN RECIPROCATING ENGINES. Licence Name and Type No. **"FIAT" airless injection C 756 S supercharged.**

No. of cylinders per engine **6** Dia. of cylinders **750 mm.** stroke(s) **1320 mm.** 2 or 4 stroke cycle **2** Single or double acting **single**

Maximum approved BHP per engine **6000** at **125** RPM of engine and **125** RPM of propeller.

Corresponding MIP **7,3 Kg/cm²** (For DA engines give MIP top & bottom) Maximum cylinder pressure **65 Kg/cm²** Machinery numeral **1200**

Are the cylinders arranged in Vee or other special formation? **in one vertical line** If so, number of crankshafts per engine -

TWO STROKE ENGINES. Is the engine of opposed piston type? **no** If so, how are upper pistons connected to crankshaft? -

Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? **through ports** No. and type of mechanically driven scavenge pumps or blowers per engine and how driven **6 piston type driven by main engine crosshead.**

No. of exhaust gas driven scavenge blowers per engine **2** Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action? -

If a stand-by or emergency pump or blower is fitted, state how driven **none** No. of scavenge air coolers **5** Scavenge air pressure at full power **0,690 Kg/cm²** Are scavenge manifold explosion relief valves fitted? **yes**

FOUR STROKE ENGINES. Is the engine supercharged? - Are the undersides of the pistons arranged as supercharge pumps? - No. of exhaust gas driven blowers per engine -

No. of supercharge air coolers per engine - Supercharge air pressure - Can engine operate without supercharger? -

TWO & FOUR STROKE ENGINES—GENERAL. No. of valves per cylinder: Fuel **one** Inlet **none** Exhaust **none** Starting **one** Safety **one**

Material of cylinder covers **S.M. cast steel** Material of piston crowns **S.M. cast steel** Is the engine equipped to operate on heavy fuel oil? -

Cooling medium for :—Cylinders **fresh water** Pistons **lub. oil** Fuel valves **fresh water** Overall diameter of piston rod for double acting engines -

Is the rod fitted with a sleeve? **no** Is welded construction employed for: Bedplate? **no** Frames? **no** Entablature? **no** Is the crankcase separated from the

underside of pistons? **yes** Is the engine of crosshead or trunk piston type? **cross-head** Total internal volume of crankcase **85,2 m³** No. and total area of explosion relief

devices **6-8830 cm²** Are flame guards or traps fitted to relief devices? **no** Is the crankcase readily accessible? **yes** If not, must the engine be removed for

overhaul of bearings, etc? - Is the engine secured directly to the tank top or to a built-up seating? - How is the engine started? **by compressed air**

Can the engine be directly reversed? **yes** If not, how is reversing obtained? -

Has the engine been tested working in the shop? **yes** How long at full power? **3 hours at 6000 BHP- 125 RPM, and 1 hour at 7200 BHP-133 RPM**

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system **15/5/58** State barred speed range(s), if imposed

for working propeller **63-75 RPM** For spare propeller - Is a governor fitted? **yes** Is a torsional vibration damper or detuner fitted to the shafting? **none**

Where positioned? - Type - No. of main bearings **7** Are main bearings of ball or roller

type? **white metal** Distance between inner edges of bearings in way of crank(s) **968 mm.** Distance between centre lines of side cranks or eccentrics of opposed piston engines -

Crankshaft type: Built, semi-built, solid. (State which) **semi-built.**

Diameter of journals **550 mm.** Diameter of crankpins **550 mm.** Breadth of webs at mid-throw **1060 mm.** Axial thickness of webs **318 mm.**

If shrunk, radial thickness around eyeholes **252,5 mm.** Are dowel pins fitted? **no** Crankshaft material Journals **S.M. steel** Pins **S.M. cast steel** Minimum } **50-60 Kg/mm²**

Webs **S.M. cast steel** Tensile strength } **50-60 Kg/mm²**

Diameter of flywheel **2646 mm.** Weight **5450 Kg.** Are balance weights fitted? **no** Total weight - Radius of gyration -

Diameter of flywheel shaft **see thrust** Material - Minimum approved tensile strength -

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) **integral with thrustshaft.**

GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and give recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

The main engine of this vessel has been constructed under Special Survey of tested materials and in accordance with the approved plans, Secretary's letters and Rules Requirements.

The materials and the workmanship are good.

The oil engine has been tried under working condition on bench at full power and found satisfactory.

The torsional vibration characteristics of the complete propelling system have been approved for a service speed of 125 R.P.M.-

This engine has now been despatched to Split (Jugoslavia) to be fitted on board the Messrs. BRODOGRADILIST
SPLIT YARD No. 152.-

When this oil engine has been installed on board the vessel and the machinery installation tried at full power to the satisfaction of the Society's Surveyor, the machinery will be eligible to be Classed in the Society's Register Book with the notation :- +LMC (with date) Oil Engine -

The engine not to be operated continuously between 63 and 75 R.P.M.

(G. Vigo).

Engineer Surveyor to Lloyd's Register of Shipping.

PARTICULARS OF IDENTIFICATION MARKS ((Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

Connecting rods LLOYD'S GEN. IL 1529- IL 2080-^{IL}2094-^{IL}2106-^{IL}2127-^{IL}2139- G.V. 30/12/58.

Piston rods LLOYD'S GEN. IL 1612- IL 1638- IL 1658- IL 1681- IL 1683- IL 2180- G.V. 15/1/59.

CRANKSHAFT ~~THE CRANKSHAFT~~ LLOYD'S GEN. S. 2827 A. G.M. 22/11/58.

FLYWHEEL SHAFT

THRUSTSHAFT

LLOYD'S GEN. 3593 G.V. 21/11/58.-Thrust collar LLOYD'S GEN. 3553 G.V. 11/12/58.

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS Exhaust gas driven scavenge blower - Genoa Certificate No. 4148.

Is the installation a duplicate of a previous case? no

If so, state name of vessel

Date of approval of plans for crankshaft 22/8/56

Straight shafting

Gearing

Clutch

Separate oil fuel tanks

Pumping arrangements

Oil fuel arrangements

Cargo oil pumping arrangements

Air receivers

Donkey boilers

Dates of examination of principal parts:-

Fitting of stern tube

Fitting of propeller

Completion of sea connections

Alignment of crank shaft in main bearings

Engine chocks & bolts

Alignment of gearing

Alignment of straight shafting

Testing of pumping arrangements

Oil fuel lines

Donkey boiler supports

Steering machinery

Windlass

Date of Committee 1 FRIDAY 23 OCT 1959

Decision

See Rpt. 1.

Special Survey Fee DURING CONSTRUCTION:

£ 718,250 =

Expenses

£ 113,813 =

REV. TAX. £ 24,372 =

Date when A/c rendered

2/11/59



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