

Rpt. 4b

COPY SENT TO SPLIT SURVEYORS.

11 APR 1960
24919

Date of writing report 31st March, 1960 Received London Port of Genoa No. 8-3-60
Survey held at Turin No. of visits In shops 31 First date 25-9-59 Last date
On vessel

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. - Name BRODOGRADILISTE SPLIT - YARD No. 161. Gross tons -

Owners - Managers - Port of Registry - Year Month

Hull built at Split By Messrs. BRODOGRADILISTE Yard No. 161 When -

Main Engines made at Turin By Messrs. FIAT S.G.M. Eng. No. 4344 When 1960

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 and screwshaft.

MAIN RECIPROCATING ENGINES. Licence Name and Type No. "FIAT" airless injection C756S supercharged. 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 0,565 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 F.W. Pistons Lub. oil Fuel valves F.W. 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? yes 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? 5 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 11-12-59 State barred speed range(s), if imposed CASE 415L 27.5.60

for working propeller 65 & 76 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.

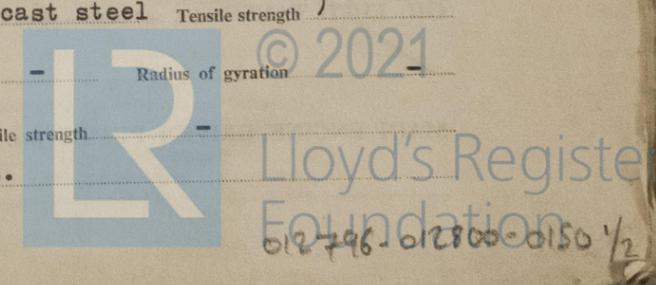
Diameter of journals 550 mm. Diameter of crankpins 550 mm. Breadth of webs at mid-throw 1060 mm. Axial thickness of webs 318 mm.

If shrunk, radial thickness around eyeholes 252,5 mm. Are dowel pins fitted? no Crankshaft material Journals S.M. steel Approved 50-60 Kg/mm² Webs S.M. cast steel Tensile strength

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.

The engine has now been despatched to Split (Jugoslavia) to be fitted on board the Messrs. Brodogradiliste Split, their Yard No.161.

When the 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 is not to be operated continuously between 65 and 76 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.)

Piston RODS Lloyd's Gen. 485 - 521 - 522 - 523 - 556 - 557 G.V. 8.1.60=
 Connecting rods Lloyd's Gen. P.432- IL 2551 - IL 2552 - IL 2569 - IL 2570 - IL 2873 G.V. 8.3.60.
 CRANKSHAFT ~~OF BRODOGRADILISTE~~ Lloyd's Gen. S. 3108/A G.M. 26.10.59.
 FLYWHEEL SHAFT)
 THRUSTSHAFT) Lloyd's Gen. SS 7881 G.V. 20.11.59 - Thrust collar Lloyd's Gen. IL 2957 G.V. 13.11.59.
 GEARING -
 INTERMEDIATE SHAFTS -
 SCREW AND TUBE SHAFTS -
 PROPELLERS -
 OTHER IMPORTANT ITEMS Exhaust gas driven scavenge blowers - Genoa Certificate N° 4749.

Is the installation a duplicate of a previous case? **yes** If so, state name of vessel **M/V "CHOPIN" (Brodogradiliste Split-Yard No Genoa Report No. 24122).**
 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 crankshaft 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 **FRIDAY - 2 DEC 1960** Special Survey Fee **during construction:**
 Decision **See Rpt. 1.** Lit. **718,750=**

Expenses " **118,536=**
 (OFFICE & TRAV.)
 REV. TAX. " **25,119=**

Date when A/c rendered **15/3/60 No 2010**



Lloyd's Register Foundation

L.R. 582d

Rpt. 4c

Date of writing report.....

Survey held at.....

FIRST

Name of Ship.....

(Or Contract No. if.....)

Ship Built at.....

Auxiliary Engines.....

Total No. of sets a.....

INTERNAL COM.....

2 or 4 stroke cycle.....

Fuel..... Diese.....

crankshafts per eng.....

per engine.....

used for: Bedplate.....

crankcase explosio.....

Pistons.....

SHAFTING.

inner edges of bea.....

minimum tensile s.....

thickness..... 75 m.....

weights fitted?.....

Has each engine.....

governing tested.....

Date of approval.....

Particulars of dr.....

Port and No. of.....

AUXILIARY C.....

Arrangement of.....

(A small diagram sh.....

attached showing ga.....

No. of air comp.....

Material of com.....

turbines started.....

Total No. of fr.....

per minute at fu.....

Have the turbin.....

attached?.....

Date of approv.....

ELECTRIC C.....

For generators.....

The foregoing.....

Is this machin.....

GENERAL I.....

State quality.....

This en.....

accords.....

material.....

and ove.....

opinion.....

This ex.....

Survey Fee.....

Expenses.....

Date when a.....

Declaration.....

at.....