

REPORT ON OIL ENGINE MACHINERY.

No. 1870

Received at London Office

Date of writing Report 21.6.1955 When handed in at Local Office 21.6.1955 Port of SPLIT Winterthur 1.4.54 1 JUN 1955

No. in Survey held at Split Date, First Survey Split 15.12.54 Last Survey 21.6.1955

Reg. Book. 90818 s on the Split Single Screw vessel. " KARLOVAC " Number of Visits Wint. 20 Spt. 28 Gross 191 Net 79

Built at Split By whom built Brodogradilište "Split" Yard No. 126 When built 1955

Engines made at Winterthur By whom made Messrs. Sulzer, Bros. Ltd. Engine No. 27711 When made 1954

Donkey Boilers made at --- By whom made --- Boiler No. --- When made ---

Brake Horse Power { Maximum 495 Service 450 Owners JADRANSKA LINIJSKA PLOVIDBA Port belonging to Rijeka

M.N. as per Rule (90) 95 Is Refrigerating Machinery fitted for cargo purposes. No Is Electric Light fitted. Yes

Trade for which vessel is intended Cargo and Passenger, Yugoslavian Coast

OIL ENGINES, &c. — Type of Engines SULZER, Solid Injection 6TW24 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 850 lbs/sq" Diameter of cylinders 240 mm Length of stroke 400 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 80 lbs/sq" Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 290 mm Is there a bearing between each crank Yes Revolutions per minute { Maximum 413 Service 400

Flywheel dia. 775 mm Weight 610 Kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) 1170.45 Means of ignition Comp. Kind of fuel used Heavy

Crank Shaft, { Solid forged as per Rule App. 19.8.54 dia. of journals 155 mm Crank pin dia. 155 mm Crank webs { Mid. length breadth 265 mm Mid. length thickness 75 mm Thickness parallel to axis --- Thickness around eyehole ---

Rev. Gear as per Rule App. 19.8.54 Flywheel Shaft, diameter as fitted 140/128 mm Intermediate Shafts, diameter as per Rule 6.7.54 Thrust Shaft, diameter at collars as fitted 110 mm

Tube Shaft, diameter as per Rule App. 6.7.54 125/123 mm Screw Shaft, diameter as per Rule App. 2.7.54 Is the { tube screw shaft fitted with a continuous liner { Yes

Bronze Liners, thickness in way of bushes as per Rule App. 2.7.54 11 mm Thickness between bushes as per Rule App. 2.7.54 8.5 mm Is the after end of the liner made watertight in the propeller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive. --- If two liners are fitted, is the shaft lapped or protected between the liners. --- Is an approved Oil Gland fitted at the after end of stern tube. --- If so, state type --- Length of bearing in Stern Bush next to and supporting propeller 570 mm met.

Propeller, dia. 1530 mm Pitch 1200 mm No. of blades 3 Material Bronze whether moveable No Total developed surface 0.796 sq. feet

Moment of inertia of propeller including entrained water (lbs. in² or Kg. cm²) 351.39 Kind of damper, if fitted ---

Method of reversing Engines Rev. Gear Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of lubrication Forced Thickness of cylinder liners 17 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine. --- Cooling Water Pumps, No. and how driven 2 D.A. on Engine Working F.W. Gen. P. in Dupl 1 D.A.

S.W. 30x90 mm Spare F.W. Bilge P. 8 W. Bilge P. 8 the sea suction provided with an efficient strainer which can be cleared within the vessel 14.4 m³/H

Bilge Pumps worked from the Main Engines, No. and capacity 1 D.A. 80 dia. 90 str. 15 T/h and 1 G.S.P. 25 T/h Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and capacity of each 1 G.S.P. 25 T/h and 1 D.A. 15 T/h How driven El. Motor From Main Eng. ---

Is the cooling water led to the bilges. No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements ---

Ballast Pumps, No. and capacity 1-G.S.P. 25 T/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 Geared P. 8 m³/H

Are two independent means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions ---

No. and size:—In machinery spaces 1 x Ø 65 mm, 2 x Ø 50 mm In pump room ---

In holds, &c. 1 x Ø 50 mm

Direct Bilge Suctions to the engine room bilges, No. and size 1 x Ø 70 mm

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction in the machinery spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges. Yes

Are all Sea Connections fitted direct on the skin of the Ship on robust steel boxes Are they fitted with valves or cocks With valves Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Below platf. with doors Are the overboard discharges above or below the deep water line above

Are they each fitted with a discharge valve always accessible on the plating of the vessel Yes Are the blow off cocks fitted with a spigot and brass covering plate ---

What pipes pass through the bunkers Bilge and Ballast Pipes How are they protected Welded reinforced joints

What pipes pass through the deep tanks --- Have they been tested as per Rule Yes

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another Yes Is the shaft tunnel watertight No Tun. Is it fitted with a watertight door --- worked from ---

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ---

Main Air Compressors, No. --- No. of stages --- diameters --- stroke --- driven by ---

Auxiliary Air Compressors, No. One No. of stages One diameters 55 mm stroke 170.5 mm driven by levers

Small Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 3, 1/4" & 1, 1/8" stroke 3, 1/4" driven by El. Motor

What provision is made for first charging the air receivers ---

Scavenging Air Pumps or Blowers, No. 6 D.A. How driven Engine levers 170.5 mm stroke, 310 mm dia.

Auxiliary Engines { Have they been made under survey Yes Engine Nos. 381169 381170 Makers name Ruston & Hornsby-Crompton Perkins Position of each in engine room Starboard Report No. C.20538

6700-554800-94800

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AIR RECEIVERS:—Have they been made under survey Yes State No. of report or certificate Genoa 99/3
State full details of safety devices Safety valves as per Rule
Can the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes
Injection Air Receivers, No. --- Cubic capacity of each --- Internal diameter --- thickness ---
Seamless, welded or riveted longitudinal joint --- Material --- Range of tensile strength --- Working pressure ---
Starting Air Receivers, No. Two Total cubic capacity 496 lit. Internal diameter 410 mm thickness 9 mm Test pr. 80 Atms
Seamless, welded or riveted longitudinal joint Seamless Material S.M.Steel Range of tensile strength 55/65 kg/sq.cm Working pressure 40 Atms
IS A DONKEY BOILER FITTED Yes If so, is a report now forwarded ---
Is the donkey boiler intended to be used for domestic purposes only Domestic only (Oil pressure see OHRID etc 2/2/55)
PLANS. Are approved plans forwarded herewith for shafting Yes Receivers Winterthur Separate fuel tanks ---
Donkey boilers --- General pumping arrangements Yes Pumping arrangements in machinery space Yes
Oil fuel burning arrangements ---
Have Torsional Vibration characteristics been approved Yes Date and particulars of approval 19.8.1954

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes State if for "short voyages" only Yes
State the principal additional spare gear supplied ---

The foregoing is a correct description, Winterthur Manufacturer.

Dates of Survey while building
During progress of work in shops See Winterthur Report Brodogradiliste "SPLIT"
During erection on board vessel 15.12.1954 - Winterthur: 20
Total No. of visits Split:
Dates of examination of principal parts—Cylinders Winterthur Covers --- Pistons --- Rods --- Connecting rods ---
Crank shaft --- Flywheel shaft Report Thrust shaft --- Intermediate shafts 4.4.55 Tube shaft 27.1.55
Screw shaft --- Propeller 27.1.55 Stern tube 27.1.55 Engine seatings 30.10.54 Engine holding down bolts 4.4.55
Completion of fitting sea connections 30.10.54 Completion of pumping arrangements --- Engines tried under working conditions ---
Crank shaft, material Winterthur Identification mark --- Flywheel shaft, material --- Identification mark Lloyd's 610&6
Thrust shaft, material Report Identification mark --- Intermediate shafts, material S.M.Steel Identification marks GM.1/11 & 31/10/
Tube shaft, material S.M.Steel Identification mark Lloyd's 617 Screw shaft, material --- Identification mark ---
Identification marks on air receivers 248 lit. 10.12.51, 2-7006 GM DALMINE 248 lit. 12.10.51 2-7020 GM DALMINE

Welded receivers, state Makers' Name ---
Is the flash point of the oil to be used over 150°F Yes
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes
Full description of fire extinguishing apparatus fitted in machinery spaces 3-Foam Exting., 10 lit. each; 1-Tetra Exting., 6 lit
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with ---
What is the special notation desired ---
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with ---

Is this machinery duplicate of a previous case --- If so, state name of vessel ---
General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.) The machinery of this vessel has been efficiently installed on board the ship in accordance with the Rules, approved plans and requirement of Secretary's letters. The material and workmanship are good. On completion, the installation has been tried under working condition at sea with satisfactory results. The machinery is, in my opinion, eligible to be classed in the Society's Register Book with record + LMC 6,55 (Oil Engines) and tail shaft (CL)

C.E.R.D. are fitted to ME

The amount of Entry Fee ... £ Din. 29,400.-
Special ... £ ---
Donkey Boiler Fee... £ ---
Travelling Expenses (if any) £ ---
When applied for 30.6. 19 55
When received 19

FRIDAY - 5 AUG 1955

(Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.



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