

Rpt. 4b

Date of writing report 10. 4. 63 Received London Port SPLIT No. 2398 -6 MAY '63
Survey held at SPLIT No. of visits In shops 31 First date 22-6-62 Last date 27-12-63

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. 92140 Name M.V. WIENIAWSKI Gross tons 7099
Owners POLISH OCEAN LINES Managers Port of Registry GDYNIA
Hull built at SPLIT By BRODOGRADILISTE "SPLIT" Yard No. 176 When 1962 12
Main Engines made at TORINO By PIAT S.G.M. Eng. No. 4486 When 1962
Donkey boilers made at ZAGREB (OIL FURED) By TUORNICA PARNIH KOTLOVA 2908 1962
KIEL (EGH.GAS) By KIELER HOWALDTS WERKE Br. Nos. 513 When
Machinery installed at SPLIT By BRODOGRADILISTE "SPLIT" When 1962 - 12

Particulars of restricted service of ship, if limited for classification
Particulars of vegetable or similar cargo oil notation, if required CARRYING VEGETABLE OIL IN MIDSHIPS DEEP-TANKS
Is ship to be classed for navigation in ice? YES (ICE CLASS 3rd) Is ship intended to carry petroleum in bulk? NO
Is refrigerating machinery fitted? YES If so, is it for cargo purposes? YES Type of refrigerant AMMONIA & BRINE
Is the refrigerating machinery compartment isolated from the propelling machinery space? YES Is the refrigerated cargo installation intended to be classed? YES

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 1 No. of propellers 1 Brief description of propulsion system ONE OIL ENGINE DIRECTLY COUPLED TO PROPELLER SHAFT

MAIN RECIPROCATING ENGINES. Licence Name and Type No. PIAT AIRLESS INJECTION C756 S SUPERCHARGED

No. of cylinders per engine Dia. of cylinders stroke(s) 2 or 4 stroke cycle Single or double acting

Maximum approved BHP per engine at RPM of engine and RPM of propeller.

Corresponding MIP (For DA engines give MIP top & bottom) Maximum cylinder pressure Machinery numeral

Are the cylinders arranged in Vee or other special formation? If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? 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? No. and type of mechanically driven scavenge pumps or blowers per engine and how driven

No. of exhaust gas driven scavenge blowers per engine 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 No. of scavenge air coolers Scavenge air pressure at power Are scavenge manifold explosion relief valves fitted?

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 Inlet Exhaust Starting Safety

Material of cylinder covers Material of piston crowns Is the engine equipped to operate on heavy fuel oil? YES

Cooling medium for :-Cylinders Pistons Fuel valves Overall diameter of piston rod for double acting engines

Is the rod fitted with a sleeve? Is welded construction employed for: Bedplate? Frames? Entablature? Is the crankcase separated from the underside of pistons? Is the engine of crosshead or trunk piston type? Total internal volume of crankcase No. and total area of explosion relief devices Are flame guards or traps fitted to relief devices? Is the crankcase readily accessible? 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? BUILT-UP SEATING How is the engine started?

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

Has the engine been tested working in the shop? How long at full power?

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 16/8/61 State barred speed range(s), if imposed for working propeller 70-82 RPM For spare propeller Is a governor fitted? Is a torsional vibration damper or detuner fitted to the shafting?

Where positioned? Type No. of main bearings Are main bearings of ball or roller type? Distance between inner edges of bearings in way of crank(s) Distance between centre lines of side cranks or eccentrics of opposed piston engines

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

Diameter of journals Diameter of crankpins Centre Breadth of webs at mid-throw Axial thickness of webs Side Pins Minimum

If shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals Approved Webs Tensile strength

Diameter of flywheel Weight Are balance weights fitted? Total weight Radius of gyration

Diameter of flywheel shaft Material Minimum approved tensile strength

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

SEE GENERAL REPORT No. 7001X

MAIN GAS TURBINES. Name and Type No.

No. of sets of turbines Open or closed cycle BHP per set at RPM of output shaft  
 How is drive transmitted to propeller shaft?  
 ARRANGEMENT OF TURBINES. HP drives at RPM HP gas inlet temperature pressure  
 IP drives at RPM IP gas inlet temperature pressure  
 LP drives at RPM LP gas inlet temperature pressure

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?  
 How is reversing effected? Are the turbines operated in conjunction with free piston gas generators?  
 Total No. of free piston gas generators Diameter of working pistons Diameter 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 working in the shop? How long at full power?

ELECTRIC PROPULSION (Reciprocating engines or gas turbines. Electrical particulars to be reported on Form 4d.)  
 No. of generators KW per generator at RPM AC or DC? Position  
 No. of propulsion motors SHP per motor at RPM Position  
 How is power obtained for excitation of generators? Motors?

REDUCTION GEARING (Reciprocating engines or gas turbines. A small line sketch should be attached showing arrangement of gearing.)  
 Is gearing of single or double helical type? If single, position of gear thrust bearing Is gearing of epicyclic type?  
 PCD of pinions: First reduction Second reduction PCD of wheels: First reduction Main  
 Material of pinions Tensile strength Material of wheel rims Tensile strength  
 Are gear teeth surface hardened? How are teeth finished? Diameter of pinion journals Wheel shaft journals  
 Are the wheels of welded construction? Is gearcase of welded construction? Has the wheel/gearcase been heat treated on completion of welding? Where is the propeller thrust bearing located? Are gear bearings of ball or roller type?

CLUTCHES, FLEXIBLE COUPLINGS, ETC. If a clutch or other flexible connection is fitted between engine/turbine and gearing or between engine and line shafting give brief description and, for clutches, state how operated  
 Can the main engine be used for purposes other than propulsion when declutched? If so, what?

STRAIGHT SHAFTING. Diameter of thrustshaft Material Minimum approved tensile strength  
 Shaft separate or integral with crank or wheel shaft? Diameter of intermediate shaft 396 mm Material S.M. STEEL  
 Minimum approved tensile strength 44 KG/SQ.MM Diameter of screwshaft cone at large end 474 mm Is screwshaft fitted with a continuous liner? YES  
 Diameter of tube shaft. (If these are separate shafts) Is tube shaft fitted with a continuous liner in way of stern tube Thickness of screw/tube shaft liner at bearings P. 24.5 Thickness between bearings 19 mm Material of screw/tube shaft S.M. STEEL Minimum approved tensile strength 44 kg/cm<sup>2</sup>  
 Is an approved oil gland fitted? NO If so, state type Length of bearing next to and supporting propeller 2000 mm  
 Material of bearing LIGNUM VITAE In multiple screw vessels is the liner between stern tube and A bracket continuous? If not, is the exposed length of shafting between liners readily visible in dry dock?

PROPELLER. Diameter of propeller 4900 mm Pitch 4100 mm Built up or solid SOLID Total developed surface 88 m<sup>2</sup>  
 No. of blades 4 Blade thickness at top of root fillet 205 mm Blade material BRONZE (STOMES NOVISTON) Moment of inertia of dry propeller  
 If propeller is of special design, state type Is propeller of reversible pitch type? NO If so, is it of approved design?  
 State method of control Material of spare propeller NONE Moment of inertia

AIR COMPRESSORS & RECEIVERS. No. of main engine driven compressors per engine NONE Can they be declutched?  
 No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) MAIN @ 32 M<sup>3</sup>/HR EACH ELECTRICALLY DRIVEN ER PLATFORM P.S. INBOARD 1 OUTBOARD. RIEL CERT NO 02/5584 & 62/5585  
 ONE 15 M<sup>3</sup>/HR DIESEL DRIVEN ER PLAT. P.S. AFT. HAM SEAT NO 61/3603  
 2 @ 10,000 LIT CAP EACH ER PLAT PORT SIDE  
 No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) ONE @ 350 LIT CAP. STBD ER PLATFORM HNO CERT 59/718 INBOARD 1 OUTBOARD. NIM C 3372/3 337  
 ONE @ 60 LIT CAP. PUMP ROOM HNO CERT 60/488  
 HAND START DIESEL DRIVEN COMPRESSOR  
 How are receivers first charged? Maximum working pressure of starting air system 30 kg/cm<sup>2</sup> Are the safety devices in accordance with the Rules? YES Has the starting of the main engines been tested and found satisfactory? YES

COOLERS. No. of main engine fresh water coolers THREE No. of main engine lubricating oil coolers TWO  
 OIL FUEL TANKS. No. and position of oil fuel settling or service tanks not forming part of hull structure NONE

MAIN ENGINE DRIVEN PUMPS (No. and Purpose)

Service for which each pump is connected to be marked thus X

-6 MAY 1962

| INDEPENDENT PUMPS<br>Name below essential pumps, state position and how driven. Give capacity of bilge pumps. | SUCTION    |              |              |          |                     |     |            |          |             |                    | DELIVERY            |                |           |          |                | OILY WAT. SEP.     |
|---|------------|--------------|--------------|----------|---------------------|-----|------------|----------|-------------|--------------------|---------------------|----------------|-----------|----------|----------------|--------------------|
|   | Bilge Main | Bilge Direct | Ballast Main | Oil Fuel | Fresh Water Cooling | Sea | Feed Tanks | Lub. Oil | Boiler Feed | Salt Water Cooling | Fresh Water Cooling | Oil Fuel Tanks | Fire Main | Lub. Oil | Piston Cooling |                    |
| ELECTRICALLY DRIVEN   |            |              |              |          |                     |     |            |          |             |                    |                     |                |           |          |                |                    |
| BILGE STBD. SIDE E/R PLATFORM 50/100 M <sup>3</sup> /H  | X          | X            | X            |          |                     | X   |            |          |             |                    |                     |                | X         |          |                | X                  |
| GENERAL SERVICES S.S. E/R PLATFORM 80 M <sup>3</sup> /H   |            |              |              |          |                     | X   |            |          | A.P.        | X                  |                     |                | X         |          |                | A.P. X O.W. SEP. X |
| BALLAST E/R PLATFORM STBD. SIDE 30/200 M <sup>3</sup> /H  | X          | X            | X            |          |                     | X   |            |          |             |                    |                     |                |           |          |                | X                  |
| S.W. CIRCUL. PUMPS E/R PLATFORM P. SIDE   |            |              |              |          |                     | X   |            |          | ENG. BILGE  | X                  |                     | X              |           |          |                |                    |
| F.W. CIRC. PUMP E/R PLATFORM P. SIDE FWD  |            |              |              |          |                     | X   |            |          |             |                    |                     | X              |           |          |                |                    |
| LUBRIC. OIL PUMP E/R PLATFORM STBD. PORT  |            |              |              |          |                     |     |            | X        |             |                    |                     |                |           | X        | X              |                    |
| BOILER FEED PUMPS STBD. AFT   |            |              |              |          |                     |     |            | X        |             | X                  |                     |                |           |          |                |                    |
| OIL FUEL BOOSTER PUMP STBD. SIDE  |            |              |              |          | X                   |     |            |          |             |                    |                     |                |           |          | X              |                    |
| AUX P & S WATER CIRCUL. PUMP STBD. SIDE   |            |              |              |          | GEN                 | X   | X          |          |             |                    | GEN                 | GEN            |           |          |                |                    |
| FORCED CIRC. PUMPS FOR E/G BLR E/R PLAT. P.S. P & A   |            |              |              |          |                     |     |            | OP. BLR  |             |                    | E.G. BLR            | X              | X         |          |                |                    |
| BILGE PUMP IN PUMP ROOM 50/100 M <sup>3</sup>   | X          |              | X            |          |                     | X   |            |          |             |                    |                     |                |           |          |                |                    |
| BALLAST PUMP IN PUMP ROOM 50/200 M <sup>3</sup>   | X          |              | X            |          |                     | X   |            |          |             |                    |                     |                |           |          |                |                    |

BILGE SUCTIONS. No. and size in each hold, deep tank or pump room HOLD No. 1 - 100/83/74 P & S; No. 2 HOLD 2 @ 83/74 P & S; No. 3 HOLD 2 @ 95/86 P & S; No. 4 HOLD 2 @ 95/86 P & S; No. 5 HOLD 2 @ 89/80 P & S. P & S DEEP TANKS 1 @ 108/100; PUMP ROOM 1 @ 108/100 P & S.  
 No. and size connected to main bilge line in main engine room 1 @ 76/67 2 @ 89/80 2-76 - open  
 Size and position of direct bilge suction in machinery spaces 1 @ 108/100 AFT  
 Size and position of emergency bilge suction in machinery spaces 1 @ 267/254 PORT FWD.  
 Is the bilge or ballast system fitted with means for separating oily water on the overboard discharge side? YES Do the piping arrangements comply with the Rules including special requirements for ships carrying petroleum in bulk, cargo oil or classed for navigation in ice? (strike out words not applicable) YES

STEAM & OIL ENGINE AUXILIARIES

| Position of each              | Type     | Made by          | Port and No. of Rpt. or Cert. | Driven Machinery (For electric generators, state output) |
|-------------------------------|----------|------------------|-------------------------------|--|
| E. R. PLATFORM PORT SIDE      | BVGM 536 | STROVER AG. HAM. | HAMBURG CERT. NO. 62/2417     | 336 KW 420KVA  |
| E. R. PLATFORM STBD. SIDE FWD | BVGM 536 | -DO-             | HAMBURG CERT. NO. 62/2421     | 336 KW   |
| E. R. PLATFORM STBD. SIDE AFT | VGM 536  | -DO-             | HAMBURG CERT. NO. 62/1982     | 300 KW 300KVA  |

DRUTZ " 348 62/2423 Super 10

Is electric current used for essential services at sea? YES If so, state the minimum No. and capacity of generators required in order that the ship may operate at sea. ONE @ 336 KW Is an electric generator driven by Main Engine? NO  
 STEAM INSTALLATION. No. of donkey boilers burning oil fuel ONE W.P. 7 KG/CM<sup>2</sup> Type CYLINDRICAL SCOTCH TYPE  
 Position AFTER E/R PLAT  
 Is a superheater fitted? NO Are these boilers also heated by exhaust gas? NO No. of donkey boilers heated by exhaust gas only? ONE W.P. 7 KG/CM<sup>2</sup>  
 Type LAMONT Position IN FUNNEL CASING Can the exhaust heated boilers deliver steam directly to the steam range or do they operate only as economisers in conjunction with oil fired boilers? ECONOMISER Port and No. of report on donkey boilers RIJEKA RPT. NO. 3442 KIEL RPT. NO. 2772  
 Is steam essential for operation of the ship at sea? YES Are any steam pipes over 3 ins. bore? YES If so, what is their material? STEEL For oil fired boilers is the arrangement of pipes, valves, controls, etc., in accordance with the Rules? YES No. of oil burning pressure units ONE No. of steam condensers - No. of Evaporators ONE  
 STEERING GEAR. (State No. and Type of Steam Engines, Electric Motors, Hydraulic Pumps and other particulars) HASTIE ELECTRIC HYDRAULIC 4 RAW TYPE HELESHAM PUMP Nos. K12351-12352 ELECTRICAL MOTORS Nos. 316505/6 CERT. NO. 9/116 94K  
 Have the Rule Requirements for fire extinguishing arrangements been complied with? YES Brief description of arrangements KIDDE CO<sub>2</sub> SYSTEM 10-10 LIT. FOAM EXTINGUISHERS 2-45 LIT. FOAM EXTINGUISHERS, 6-6 LIT. CO<sub>2</sub> EXTINGUISHERS SAND KIM IN WAY OF FINE HYDRANTS P & S WITH SPRAY & JET No. 22LE DIESEL DRIVEN FINE PUMP IN PUMP ROOM  
 Has the spare gear required by the Rules been supplied? YES Has all the machinery been tried under full working conditions and found satisfactory? YES Date and duration of full-power sea trials of main engines 20.12.62 6 HRS. Does this machinery installation contain any features of a novel or experimental nature? (Give particulars)  
 The foregoing description of the main engine and installation is correct and the particulars are as approved for torsional vibration characteristics (strike out words not applicable).



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 MACHINERY DESCRIBED HEREIN HAS BEEN INSTALLED UNDER SPECIAL SURVEY IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS & RULE REQUIREMENTS. MATERIALS & WORKMANSHIP ARE GOOD. ON COMPLETION THE MAIN AND AUXILIARY MACHINERY WERE TRIED UNDER FULL POWER CONDITION WITH SATISFACTORY RESULTS. THE SAFETY VALVES OF BOTH BOILERS WERE ADJUSTED UNDER STEAM AT 7 KG/CM<sup>2</sup> AND ACCUMULATION TESTS CARRIED OUT. A NOTICE AT THE CONTROL STATION STATES THAT THE MAIN ENGINE IS NOT TO BE RUN CONTINUOUSLY BETWEEN 70 & 82 R.P.M. THE MACHINERY IS ELIGIBLE IN MY OPINION TO BE CLASSED IN THE SOCIETY REGISTER BOOK WITH THE RECORD OF LMC (OIL ENG.) ES 12.62, TS(CL) 12.62 ABS 12.62.

*J. Blgray*

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.)

RODS

CRANKSHAFT OR ROTORSHAFT

FLYWHEEL SHAFT

THRUSTSHAFT

SEE GEN RPT. No. 27004

GEARING

INTERMEDIATE SHAFTS

LLOYD'S SPT N° 5204 M F.B.G. 31/7/62

SCREW AND TUBE SHAFTS

LLOYD'S SPT N° 5134 M F.B.G. 28/7/62

PROPELLERS

2 3322 RN D79478 LLOYD'S 26.5.61 A.D.H. LONDON

OTHER IMPORTANT ITEMS

Is the installation a duplicate of a previous case?

YES

If so, state name of vessel

M.V. NOWOWIEJSKI

Date of approval of plans for crankshaft

Straight shafting 20.11.59

Gearing -

Clutch -

Separate oil fuel tanks

Pumping arrangements

20.6.1960

Oil fuel arrangements

20.6.60

Cargo oil pumping arrangements

Air receivers

Donkey boilers

Dates of examination of principal parts:-

Fitting of stern tube 31-7-62

Fitting of propeller 2-8-62

Completion of sea connections 2-8-62

Alignment of crankshaft in main bearings -

Engine chocks & bolts 22-11-62

Alignment of gearing -

Alignment of straight shafting 22-11-62

Testing of pumping arrangements 20/21-11

Oil fuel lines 22-9-62

30-11-62

Donkey boiler supports 22-11-62

Steering machinery 20-12-62

Windlass 20-12-62

Date of Committee

Decision

+ LMCES

ABS

TS(CL)

SPS

12.62

Special Survey Fee MACH.INS. £130-0-0

and Din. 275,000.-

Expenses CHARGED HULL RPT.

Date when A/c rendered



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