

REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

MAY 1964

Received at London Office

Date of writing Report 28th April 64 When handed in at Local Office 19 Port of Gdansk

No. in Survey held at Gdynia Date, First Survey 17-6-1963 Last Survey 20-2-19 64
Reg. Book (No. of Visits 15)

42711 on the M.S. "FRANCESCO NULLO" Tons { Gross 5668 Net -

Built at Gdynia By whom built St.im. Kom. Paryskiej Yard No. B41/1 When built 1964

Owners Polish Government Port belonging to Gdansk

Installation fitted by Stocznia im. Komuny Paryskiej, Gdynia, Electrical Department When fitted 1964

Is vessel equipped for carrying Petroleum in bulk no Is vessel equipped with D.F. yes E.S.D. yes Gy.C. yes Sub.Sig. no Radar yes

Plans, have they been submitted and approved yes System of Distribution 3-wire, 3Phase Voltage of Lighting 220V

Heating 220V Power 380V D.C. or A.C. Lighting A.C. Power A.C. If A.C. state frequency 50 Hz

Prime Movers, has the governing been found as per Rule when full load is thrown on and off yes Are turbine emergency governors fitted with a trip switch N.A. Generators, are they compound wound - and level compounded under working conditions -

Are the generators arranged to run in parallel yes Is the compound winding connected to the negative or positive pole -

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing yes Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule yes Position of Generators ER.Lower Platform

Starboard, Forward inboard and outboard, stbd aft.

is the ventilation in way of generators satisfactory yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil yes Switchboards, where are main switchboards placed E.R., middle platform

level, aft, athwartships

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil yes Dead Front type, Fittings mounted on insulated bases, if of synthetic insulating material is it an Approved Type - if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the construction as per Rule, including locking of screws and nuts yes Description of Main Switchgear for each generator and arrangement of equaliser switches Triple-pole circuit breakers with overload, reverse power and under-voltage tripping relays. Overload and reverse power relays with time delay setting. Automatic Voltage regulators and synchronising lamps.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit triple-pole circuit breakers with fuses and overload relays. Preferential tripping for non essential circuits with time setting.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 13

ammeters 5 voltmeters 3 synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection Earth Testing, state means provided OHM Meters

fitted for 380V and 220 V Preference Tripping, state if provided yes and tested yes

circuits Switches, Circuit Breakers and Fuses, are they as per Rule yes are the fuses an Approved Type yes

make of fuses Polish State factories are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate 140% F.L.C. and at what power do the reverse power protective devices operate 8% rated power Cables, are they insulated and protected as per Rule yes

if otherwise than as per Rule are they of an Approved Type - state maximum fall of pressure between bus bars and any point under maximum load 8 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends -

Are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage yes are any cables laid under machines or floorplates no if so, are they adequately protected - State type of cables (if in conduit this should also be stated) in machinery spaces V.R., L.C.W.B., galleys V.R., L.C.W.B. and laundries V.R., L.C.W.B. State how the cables are supported or protected steel cable trays or strong steel supporting brackets with clips. Cables suitably protected where exposed.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes where unarmoured cables pass through beams, etc., are the holes effectively bushed yes Refrigerated chambers, are the cables and fittings as per Rule -

Have refrigeration fan motors been constructed under survey - and test certificates supplied -

Are the motors accessible for maintenance at all times -

7 9200-097210-257210

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes Emergency Supply, state position 24 V secondary batteries, in separate compartment, navigating deck, aft.

Navigation Lamps, are they separately wired yes controlled by separate double pole switches and fuses yes Are the switches and fuses in a position accessible only to the officers on watch yes is an automatic indicator fitted yes Is an alternative supply provided yes

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule yes, state battery capacity in ampere hours 4 x 170 Where required to do so does it comply with 1948 International Convention -

Lighting, is fluorescent lighting fitted yes If so, state nominal lamp voltage 220 V and compartments where lamps are fitted Engine Room, alleyways, accommodation and public rooms

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof yes

Searchlights, No. of 1, whether fixed or portable portable, are they of the carbon arc or of the filament type filament

Heating and Cooking, is the general construction as per Rule yes, are the frames effectually earthed yes, are heaters in the accommodation of the convection type yes Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil yes

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment yes Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing yes

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule yes

Lightning Conductors, where required are they fitted as per Rule -

Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complied with -, are all fuses of an Approved Cartridge Type -, make of fuse - Are the fittings for pump

rooms, 'tween deck spaces, etc. in accordance with the special requirements for such ships - Are all cables lead covered as per Rule -

E.S.D., if fitted state maker M.O.R.S. "Type SPX 11" location of transmitter and receiver in separate compartment, E.R. forward, bulkhead

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory yes

PARTICULARS OF GENERATING PLANT

| DESCRIPTION OF GENERATOR | No. of | MAKER | kVA RATED AT | | | | TYPE | PRIME MOVER |
|------------------------------|--------|-----------------------------|-------------------|-------|---------|----------------|------------|-------------------------------|
| | | | kVA per Generator | Volts | Ampères | Revs. per Min. | | |
| MAIN ... | 2 | Tvornica Rade Koncar-Zagreb | 400 | 400 | 577 | 500 | Oil Engine | "H.Cegielski-Sulzer", Poznań |
| | 1 | - do - | 250 | 400 | 360 | 500 | 4SCSA | "Zgoda-Sulzer"-Świętochłowice |
| EMERGENCY ROTARY TRANSFORMER | - | | | | | | | |

GENERATOR CABLES

| DESCRIPTION | No. of | kVA | CONDUCTORS | | MAXIMUM CURRENT IN AMPERES | | APPROX LENGTH (lead plus return) in meters | INSULATION | PROTECTIVE COVERING |
|---------------------------|--------|-----|--------------------------|---------------------------|----------------------------|------|--|------------|---------------------|
| | | | No. in Parallel per Pole | Sectional Area in sq. mm. | In the Circuit | Rule | | | |
| MAIN GENERATOR | 2 | 400 | 4 | 3 x 150 | 577 | 580 | 40 | V.R. | L.C.W.B. |
| " " EMERGENCY | 1 | 250 | 3 | 3 x 120 | 360 | 390 | 40 | " | " |
| EMERGENCY GENERATOR | - | | | | | | | | |
| ROTARY TRANSFORMER: MOTOR | - | | | | | | | | |
| " " GENERATOR | - | | | | | | | | |

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.)

| Circuit No.: | DESCRIPTION | No. of | CONDUCTORS | MAXIMUM CURRENT IN AMPERES | APPROX LENGTH (lead plus return) in meters | INSULATION | PROTECTIVE COVERING |
|--------------|---|--------|------------|----------------------------|--|------------|---------------------|
| | IV Shore Supply | 2 | 3 x 70 | 180 | 182 | 40 | V.R. L.C.W.B. |
| | 38 NO.I Transformer primary windings 400/230.V. | 1 | 2 x 70 | 72 | 91 | 20 | " " |
| | 39 No.II " " 400/230 V | 1 | 3 x 70 | 72 | 91 | 20 | " " |
| | 16 Capstan Stbd side | 1 | 3 x 35 | 60 | 60 | 35 | " " |
| | 51 " Port Side | 1 | 3 x 35 | 60 | 60 | 40 | " " |
| | 21 Steering Gear I | 1 | 3 x 25 | 46.5 | 49 | 70 | " " |
| | 55 " " II | 1 | 3 x 25 | 46.5 | 49 | 70 | " " |
| | 01 "Hi-Press" D.B. | 1 | 3 x 95 | 110 | 110 | 30 | " " |
| | 18 Windlass | 1 | 3 x 95 | 125 | 110 | 80 | " " |

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.)

| Circuit No. | DESCRIPTION | No. in Parallel per Pole | CONDUCTORS | MAXIMUM CURRENT IN AMPERES | | APPROX LENGTH (lead plus return) in meters | INSULATION | PROTECTIVE COVERING |
|-------------|---------------------------------------|--------------------------|------------|----------------------------|------|--|------------|---------------------|
| | | | | In the Circuit | Rule | | | |
| 02 | D.B. Galley | 1 | 3 x 95 | 91.5 | 110 | 10 | V.R. | L.C.W.B. |
| 03 | D.B. "Hi-Press" Fans | 1 | 3 x 35 | 54 | 60 | 25 | " | " |
| 04 | D.B. Aux. Fans | 1 | 3 x 35 | 40.6 | 60 | 10 | " | " |
| 05 | D.B. Hold Nos. I, II Vent Fans | 1 | 3 x 50 | 67 | 75 | 75 | " | " |
| 06 | D.B. " Nos. III " " S 06 | 1 | 3 x 25 | 40 | 49 | 75 | " | " |
| 07 | D.B. " Nos. IV.V " " S 07 | 1 | 3 x 50 | 58 | 75 | 35 | " | " |
| 09 | D.B. Domestic Refrig M'cht | 1 | 3 x 25 | 42.4 | 49 | 30 | " | " |
| 11 | D.B. E.R. Auxiliaries | 1 | 3 x 50 | 68.4 | 75 | 10 | " | " |
| 12 | D.B. " " S 12 | 1 | 3 x 25 | 42.6 | 49 | 10 | " | " |
| 13 | D.B. " " S 13 & Workshop | 1 | 3 x 35 | 55.2 | 60 | 40 | " | " |
| 14 | D.B. E.R. Vent Fans S 14 | 1 | 3 x 95 | 89.4 | 110 | 10 | " | " |
| 25 | D.B. Cargo Winch rotary trans-formers | 2 | 3 x 50 | 144 | 150 | 80 | " | " |
| 26 | D.B. " " " " S 26 | 2 | 3 x 50 | 144 | 150 | 80 | " | " |
| 27 | D.B. " " " " S 27 | 2 | 3 x 50 | 142 | 150 | 45 | " | " |
| 28 | D.B. " " " " S 28 | 1 | 3 x 95 | 107 | 110 | 45 | " | " |
| 35 | D.B. Domestic Appliances | 1 | 3 x 35 | 48.8 | 60 | 35 | " | " |
| 46 | D.B. E.R. Auxiliaries | 1 | 3 x 50 | 82.4 | 75 | 10 | " | " |
| 47 | D.B. " " S 47 | 1 | 3 x 25 | 41.5 | 49 | 10 | " | " |
| 48 | D.B. Boiler Room | 1 | 3 x 50 | 61 | 75 | 20 | " | " |
| 49 | D.B. E.R. Vent Fans | 1 | 3 x 70 | 87 | 91 | 20 | " | " |
| 61 | D.B. Outer lighting | 1 | 3 x 25 | 49 | 49 | 45 | " | " |
| 62 | D.B. E.R. " S 62, S 62-a | 1 | 3 x 6 | 15.5 | 21 | 15 | " | " |
| 63 | D.B. " " S 63, S 63-a | 1 | 3 x 10 | 24.6 | 28 | 20 | " | " |
| 64 | D.B. Accommodation Lighting S 64 | 1 | 3 x 25 | 49 | 49 | 25 | " | " |
| 67 | D.B. " " S 67 | 1 | 3 x 25 | 42 | 49 | 25 | " | " |

MOTOR CABLES

| ALL IMPORTANT MOTORS TO BE ENUMERATED | No. | kW | CONDUCTORS | MAXIMUM CURRENT IN AMPERES | | APPROX LENGTH (lead plus return) in meters | INSULATION | PROTECTIVE COVERING |
|---------------------------------------|-----|------|------------|----------------------------|------|--|------------|---------------------|
| | | | | In the Circuit | Rule | | | |
| Diesel Oil Transfer Pump | 1 | 12.5 | 3 x 10 | 29 | 28 | 35 | " | L.C.W.B. |
| O.F. Booster Pump | 2 | 4.0 | 3 x 15 | 8 | 8 | 40 | " | " |
| Fuel Valve Cooling Pump | 2 | 4.5 | 3 x 2.5 | 9.1 | 11 | 40 | " | " |
| Starting Air Compressor | 2 | 55 | 3 x 120 | 122 | 130 | 15 | " | " |
| Piston Cooling Pump | 2 | 25.7 | 3 x 25 | 51 | 49 | 60 | " | " |
| Bilge-Ballast Pump | 1 | 24 | 3 x 25 | 46 | 49 | 70 | " | " |
| Lub. Oil Pump | 2 | 30 | 3 x 25 | 58 | 49 | 50 | " | " |
| M.E. Salt Water Circ. Pp. | 1 | 39 | 3 x 70 | 76 | 91 | 60 | " | " |
| Fire Pump | 2 | 53 | 3 x 95 | 100 | 110 | 65 | " | " |
| M.E. St. By Cooling Pump | 1 | 35.3 | 3 x 50 | 71 | 75 | 40 | " | " |
| Heavy Fuel Transfer Pump | 1 | 12.5 | 3 x 10 | 29 | 28 | 20 | " | " |
| Aux. Engine S.W. Cooling Pp | 1 | 10 | 3 x 6 | 20 | 21 | 25 | " | " |
| Aux. Engine F.W. " " | 1 | 10 | 3 x 6 | 20 | 21 | 30 | " | " |
| 302 Boiler Feed Pump | 2 | 10 | 3 x 10 | 20 | 28 | 13 | " | " |
| 303 Economiser Circul. Pump | 1 | 4.5 | 3 x 2.5 | 9.1 | 11 | 10 | " | " |
| 4 Bilge Pump | 1 | 13.5 | 3 x 10 | 26 | 28 | 35 | " | " |
| 7 M.E. Fresh Water Clg. Pump | 1 | 38 | 3 x 70 | 74 | 91 | 40 | " | " |
| 8 Windlass | 1 | 55 | 3 x 95 | 125 | 110 | 80 | " | " 1/2 hour rating |
| 5 Steering Gear | 2 | 23.5 | 3 x 25 | 46.5 | 49 | 70 | " | " |

NOTE.—Use Rpt. 43 Continuation Sheet if the above space is insufficient

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
 All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
 The foregoing is a correct description.

STOCZNIA im. KOMUNY PARYSKIEJ
 Przedsiębiorstwo Państw.
 GDYNIA, ul. Czechosłowacka 3
 Dyrektor Techniczny
 mgr inż. Stanisław Gorgoń
 Electrical Contractors. Date

COMPASSES

Have the compasses been adjusted under working conditions..... Yes

STOCZNIA im. KOMUNY PARYSKIEJ
 GDYNIA, ul. Czechosłowacka 3
 Dyrektor Techniczny
 mgr inż. Stanisław Gorgoń
 Builder's Signature. Date

Have the foregoing descriptions and schedules been verified and found correct..... yes

Is this installation a duplicate of a previous case..... No. If so, state name of vessel.....

Plans. Are approved plans forwarded herewith..... Yes. If not, state date of approval..... 14-12-62

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith..... Yes

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.).....

The electrical equipment of this Ship has been installed under Special Survey in accordance with the Rule requirements, Secretary's letters and approved plans. The materials used and the workmanship are good.

On completion the installation was tested in accordance with Rule requirements, with satisfactory results, and it is submitted that the installation is eligible to be classed with the Society.

Total Capacity of Generators..... 1050 kVA
 Kilowatts.

zł 12.570.- & £ 243.15.0

The amount of Fee ...less 10% = £ 219.10.0
 When applied for, 31.1. 1964

Travelling Expenses (if any) zł 11.- : 12.3. 1964
 (zł amount only)

B. Langhammer & M. Chuchla
 Surveyors to Lloyd's Register of Shipping

FRIDAY 19 JUN 1964

Committee's Minute.....

Assigned..... See Rpt 46

3m.5.60-Transfer. (MADE AND PRINTED IN ENGLAND) (The Surveyors are requested not to write on or below the space for Committee Minutes.)

29 MAY 1964



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