

Rpt. 13

No. F.E.M. 042

REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 14-2-61 19 When handed in at Local Office 15-2-1961 Port of Gdańsk

No. in Survey held at Gdynia Date, First Survey 30-11-60 Last Survey 28-1-1961
Reg. Book (No. of Visits 16) Gross 677

on the M.V. "NANAS" Tons Net

Built at Gdynia By whom built Stocznia im. Komuny Paryskiej w Gdyni Yard No. B471/9 When built 1961-1

Owners Indonesian Government Port belonging to Djakarta

Installation fitted by Shipyard Electrical Dept. When fitted 1961-1

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

Plans, have they been submitted and approved. yes System of Distribution 2 wire D.C. Voltage of Lighting 220

Heating - Power 220 D.C. or A.C. Lighting - Power - If A.C. state frequency -

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. - Generators, are they compound wound. yes, and level compounded under working conditions. yes

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

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

level Ford Port, For'd Centre and For'd Starboard

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 Engine room floor

level port forward side

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, what insulation is used for the panels. Dead front board, 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 overboard and reverse current relay.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. Rotary Switches and fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. yes Instruments on main switchboard. 7

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

Voltmeter megohmmeter Preference Tripping, state if provided. yes, and tested. yes

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

make of fuses. Polish State Factories BM WTC I & II & B16 are all fuses labelled. yes If circuit breakers are provided for the generators, at what overload do they operate. 20 sec delay at 210 AMP (115% FL)

and at what current do the reverse current protective devices operate. 20 Amps 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. less 6% 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. yes, if so, are they adequately protected. yes State type of cables (if in conduit this should also be stated) in machinery spaces. L.C.W.B., galleys. L.C.W.B.

and laundries. - State how the cables are supported or protected. carried on cable trays

or securly clipped to steel supporting brackets. Cables running within cargo spaces protected by sheet metal casings

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. yes

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

Are the motors accessible for maintenance at all times. yes



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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes Emergency Supply, state position Battery compartment in lower bridge deck

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 148 Where required to do so does it comply with 1948 International Convention -

Lighting, is fluorescent lighting fitted no If so, state nominal lamp voltage - and compartments where lamps are fitted -

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 fixed, 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 - 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 -

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

Lighting 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 Marconi location of transmitter and receiver Cofferdam under Stbd For'd side of Engine room

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 | RATED AT | | | | TYPE | PRIME MOVER | |
|----------------------------------|--------|------------------|-------------------|-------|---------|----------------|--------|-------------|-------|
| | | | Kw. per Generator | Volts | Ampères | Revs. per Min. | | MAKER | MAKER |
| MAIN ... | 2 | A.D. Strüver HAM | 42 | 220 | 182 | 1350 | Diesel | Deutz | |
| EMERGENCY ... ROTARY TRANSFORMER | | | | | | | | | |

GENERATOR CABLES

| DESCRIPTION | No. of | Kw. | CONDUCTORS | | MAXIMUM CURRENT IN AMPERES | | APPROX. LENGTH (lead plus return feet) | INSULATION | PROTECTIVE COVERING |
|---------------------------|--------|-----|--------------------------|---|----------------------------|------|--|------------|---------------------|
| | | | No. in Parallel per Pole | Sectional Area or No. and Dia. of Strands Sq. ins. or sq. mm. | In the Circuit | Rule | | | |
| MAIN GENERATOR ... | 3 | 42 | 1 | 150 | 182 | 205 | 14 | Rubber | LCWB |
| " " EQUALISER ... | 3 | | 1 | 70 | | 125 | 7 | " | " |
| EMERGENCY GENERATOR ... | | | | | | | | | |
| ROTARY TRANSFORMER: MOTOR | | | | | | | | | |
| " " GENERATOR ... | | | | | | | | | |

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.)

| DESCRIPTION | No. of | Kw. | Volts | Ampères | Revs. per Min. | TYPE | INSULATION | PROTECTIVE COVERING |
|----------------------------------|--------|-----|-------|---------|----------------|--------|------------|---------------------|
| Shore supply to main Switchboard | 1 | 150 | 200 | 205 | 50 | Rubber | LCWB | |

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

| Circuit No. | DESCRIPTION | CONDUCTORS | | MAXIMUM CURRENT IN AMPERES | | APPROX. LENGTH (lead plus return feet) | INSULATION | PROTECTIVE COVERING |
|-------------|------------------------------------|--------------------------|---|----------------------------|------|--|------------|---------------------|
| | | No. in Parallel per Pole | Sectional Area or No. and Dia. of Strands Sq. ins. or sq. mm. | In the Circuit | Rule | | | |
| 01 | Domestic Service aft (Box S16) | 1 | 50 | 82 | 99 | 40 | | |
| 02 | Cargo Winches Ford | 1 | 50 | 94 | 99 | 60 | | |
| 03 | Cargo Winches aft | 1 | 50 | 94 | 99 | 40 | | |
| 09 | Engine room Dist Box S 3 | 1 | 6 | 27 | 29 | 20 | | |
| 10 | Engine room Dist box S4 | 1 | 10 | 26 | 38 | 30 | | |
| 15 | Domestic Service Mdships (Box S15) | 1 | 10 | 30 | 38 | 80 | | |
| 18 | Hold Fans (Box S5) | 1 | 2.5 | 11 | 15.5 | 20 | | |
| 19 | Domestic Refrig m/c | 1 | 6 | 18 | 29 | 40 | | |
| 20 | Lighting main deck (Box S7) | 1 | 2.5 | 14 | 15.5 | 20 | | |
| 21 | Radio installation (Box S 8) | 1 | 10 | 20 | 38 | 80 | | |
| 22 | Lighting Shelterdk (Box S 9) | 1 | 2.5 | 12 | 15.5 | 60 | | |
| 23 | Lighting Deck (Box S 10) | 1 | 2.5 | 9 | 15.5 | 80 | Rubber | L.C.W.B. |
| 24 | Lighting (Box S 11) | 1 | 2.5 | 14 | 15.5 | 80 | | |
| 25 | Lighting Shelterdk (Box S 17) | 1 | 1.5 | 7 | 9.5 | 80 | | |
| 26 | Lighting Engine Room (Box S 12) | 1 | 2.5 | 11 | 15.5 | 20 | | |
| 27 | Navigation Equipment | 1 | 4 | 16 | 22.5 | 80 | | |
| 29 | Battery Switchboard | 1 | 2.5 | 9 | 15.5 | 80 | | |
| 30 | Navigation lighting | 1 | 1.5 | 2 | 9.5 | 80 | | |
| 31 | Special Lighting | 1 | 1.5 | 4 | 9.5 | 80 | | |
| 32 | Accommodation fans | 1 | 1.5 | 3 | 9.5 | 60 | | |
| 33 | Lighting (Box S 20) | 1 | 2.5 | 14 | 15.5 | 15 | | |
| 34 | Accommodation fans (Box S 19) | 1 | 1.5 | 5 | 9.5 | 20 | | |
| 34" | Emergency lighting circuit | 1 | 1.5 | 1 | 9.5 | 80 | | |

MOTOR CABLES

| ALL IMPORTANT MOTORS TO BE ENUMERATED | No. | B.H.P. | Volts | Ampères | Revs. per Min. | TYPE | INSULATION | PROTECTIVE COVERING |
|---------------------------------------|-----|--------|-------|---------|----------------|------|------------|---------------------|
| 04 Windlass | 1 | 28 | 1 | 50 | 95 | 99 | 100 | |
| 05 M.E. F.W. Cooling pump | 1 | 17.75 | 1 | 35 | 60 | 78 | 20 | |
| 06 Fire pump | 1 | 17.75 | 1 | 35 | 60 | 78 | 20 | |
| 07 Air compressors | 1 | 17.75 | 1 | 35 | 60 | 78 | 30 | |
| 11 Ballast pump | 1 | 15.3 | 1 | 35 | 52 | 78 | 20 | |
| 12 Bilge pump | 1 | 13.75 | 1 | 16 | 47 | 49 | 20 | Rubber L.C.W.B. |
| 17 ME L.O. pump | 1 | 5.75 | 1 | 4 | 18 | 22.5 | 20 | |
| 28 Steering machinery | 1 | 4 | 1 | 2.5 | 14 | 15.5 | 40 | |
| Fuel oil transfer pump | 1 | 2.25 | 1 | 1.5 | 7 | 9.5 | 30 | |
| Fuel oil service pump | 1 | .65 | 1 | 1.5 | 2.3 | 9.5 | 30 | |
| Engine room fans | 2 | 2.5 | 1 | 1.5 | 8.5 | 9.5 | 35 | |
| Oil purifiers | 2 | .9 | 1 | 1.5 | 3 | 9.5 | 30 | |

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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.

DYREKTOR STOCZNI *[Signature]* STOCZNIJA Im. KOMUNY PARYSKIEJ Electrical Contractors. Date 15-2-1961
 Gdynia, ul. Czechoslowacka 8

COMPASSES

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

DYREKTOR STOCZNI *[Signature]* STOCZNIJA Im. KOMUNY PARYSKIEJ Builder's Signature. Date 15-2-1961
 Gdynia, ul. Czechoslowacka 8

Have the foregoing descriptions and schedules been verified and found correct... yes
 Is this installation a duplicate of a previous case... yes If so, state name of vessel... "RAMBUTAN", "DUKUH", "DUREN", "DUWET", "DJERUK", "LANGSAT", "LENGKENG", "MANGGA"
 Plans. Are approved plans forwarded herewith... no If not, state date of approval... 7-12-59
 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, cables and fittings in this vessel have been fitted and installed under Special Survey in accordance with the Rules approved plans and Secretary's Letters.

The installation has been tested under working conditions and found satisfactory. The quality of material and workmanship are good. The installation in my opinion is such as could be classed with the Society in conjunction with the Main and Auxiliary Machinery.

Total Capacity of Generators... 126 Kilowatts.

The amount of Fee ... £97.-.6. : When applied for, 31-1-61
 & zł 5082 19
 Travelling Expenses (if any) £zł 570.- : When received, 19

N. Dienes
 Surveyor to Lloyd's Register of Shipping
 N. Dienes

Committee's Minute... FRIDAY, 12 MAY 1961

Assigned... *[Signature]*

3m, 5, 60—Translet. (MADE AND PRINTED IN ENGLAND) (The Surveyors are requested not to write on or below the space for Committee Minute.)

AMS
 24.2.61

