

REPORT ON ELECTRICAL EQUIPMENT.

30 DEC 1948

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 14/12 1948 When handed in at Local Office Dec 10 1948 Port of Rotterdam

No. in Survey held at Gleusden Date, First Survey 29th Oct Last Survey 24th Nov. 1948
Reg. Book. (Number of Tons.....)

on the M. S. Elisa (coaster) Tons { Gross 407.96
Net 257.77

Built at Gleusden By whom built De Haan & Delemans Yard No. 250 When built Nov '48

Owners N. N. Motorschip, Elisa Port belonging to Rotterdam

Electrical Installation fitted by P. H. Rotsheld, Elektotechnisch Bureau Contract No. When fitted Nov '48

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

Have plans been submitted and approved yes System of Distribution two-wire with direct current Voltage of supply for Lighting 220

Heating — Power 220 Direct or Alternating Current, Lighting direct Power direct If Alternating Current state periodicity — Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off yes Are turbine emergency governors fitted with a

trip switch as per Rule — Generators, are they compound wound yes, are they level compounded under working conditions yes,

if not compound wound state distance between generators — and from switchboard — Where more than one generator is fitted are they

arranged to run in parallel no, are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole

negative pole Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing — Have certificates of

test for machines under 100 kw. been supplied yes and the results found as per rule yes Are the lubricating arrangements and the construction

of the generators as per rule yes Position of Generators engine room

, is the ventilation in way of generators satisfactory yes are they clear of inflammable material yes, if situated

near unprotected combustible material state distance from same horizontally — and vertically —, are the generators protected from mechanical

injury and damage from water, steam and oil yes, are the bedplates and frames earthed yes and the prime movers and generators in metallic

contact yes Switchboards, where are main switchboards placed engine room

are they in accessible positions, free from inflammable gases and acid fumes yes, are they protected from mechanical injury and damage from water, steam

and oil yes, if situated near unprotected combustible material state distance from same horizontally — and vertically —, what insulation

material is used for the panels Sindanyo, if of synthetic insulating material is it an Approved Type yes, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule — Is the frame effectually earthed yes

Is the construction as per Rule yes, including accessibility of parts yes, absence of fuses on the back of the board yes, individual fuses

to pilot and earth lamps, voltmeters, etc. yes locking of screws and nuts yes, labelling of apparatus and fuses yes, fuses on the "dead"

side of switches yes Description of Main Switchgear for each generator and arrangement of equaliser switches D.P. & T. mitch & D.P. fuses

and for each outgoing circuit D.P. mitch & D.P. fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule — Instruments on main switchboard 2

ammeters 4 voltmeters — synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection — Earth Testing, state means provided earth lamps connected to "E" through fuses

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an approved type yes, are all fuses labelled as

per Rule yes If circuit breakers are provided for the generators, at what overload current did they open when tested —, are the reversed current

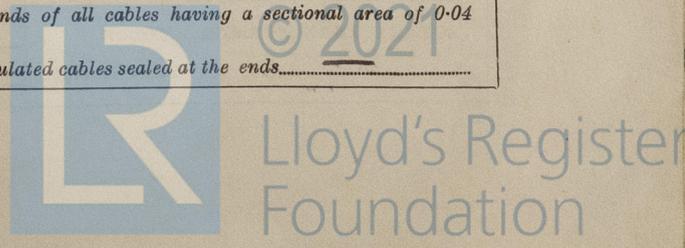
protection devices connected on the pole opposite to the equaliser connection —, have they been tested under working conditions, and at what current

did they operate — Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule yes

Cables, are they insulated and protected as per the appropriate Tables of the Rules 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 < 4%, are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets yes Are paper insulated and varnished cambric insulated cables sealed at the ends —



with insulating compound or waterproof insulating tape. 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 cables laid under machines or floorplates. No, if so, are they adequately protected. Are cables in machinery spaces, galleys, laundries, etc., lead covered. Yes or run in conduit. State how the cables are supported and protected: In engine room, h.c. & cables fitted on perforated galvanised iron plates in accommodation spaces h.c. cables clipped to surface or more ground in cargo spaces h.c. & cables fitted on sheet iron plates and protected with sheet iron covers

Are all lead sheaths, armouring and conduits effectually bonded and earthed. Yes. Refrigerated chambers, are the cables and fittings as per Rule. 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 and with what material. Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes. Emergency Supply, state position. 220V 50Ah battery charged by main generators and method of control.

Navigation Lamps, are they separately wired. Yes controlled by separate double pole switches. Yes 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. Secondary Batteries, are they constructed and fitted as per Rule. Yes, are they adequately ventilated. Yes what is the battery capacity in ampere hours. 50Ah

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. Yes. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. Yes, if so, how are they protected. and where are the controlling switches fitted. Yes, are all fittings suitably ventilated. Yes, are all fittings and accessories constructed and installed as per Rule. Yes. Searchlight Lamps, No. of 1, whether fixed or portable. Yes, are their fittings as per Rule. 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. Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. Yes, if situated near unprotected combustible material state minimum distance from same horizontally. Yes and vertically. Yes. Are motors coupled to oil fuel transfer and unit 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 services been supplied and the results found as per Rule. Yes. Control Gear and Resistances, are they constructed and fitted as per Rule. Yes. Lightning Conductors, where required are they fitted as per Rule. Yes. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with. Yes, are all fuses of the cartridge type. Yes, are they of an approved type. Yes. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. Yes. Are the cables lead covered as per Rule. Yes. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. Yes, are they 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 | RATED AT | | | DRIVEN BY | WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE. | |
|---------------------------|--------|------------|--------|----------|-----------|--|------------------------|
| | | Kilowatts. | Volts. | Ampères. | | Rera. per Min. | Fuel Used. |
| MAIN | 1 | 0 | 230 | 35 | 1000 | Diesel engine | diesel oil above 150°f |
| | 1 | 2 | 220 | 9.1 | 150/1500 | main shaft | |
| EMERGENCY | | | | | | | |
| ROTARY TRANSFORMER | | | | | | | |

GENERATOR CABLES.

| DESCRIPTION. | KILOWATTS. | CONDUCTORS. | | MAXIMUM CURRENT IN AMPERES. | | APPROX. LENGTH (load plus return feet). | INSULATED WITH. | HOW PROTECTED. |
|---------------------------|------------|---------------------------|--|-----------------------------|-------|---|-----------------|----------------|
| | | No. in Parallel Per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit. | Rule. | | | |
| MAIN GENERATOR I | 0 | 1 | 10. | 35 | 30 | 12. | V.I.R. | L.C.A. |
| " " EQUALISER II | 2 | 1 | 6 | 9.1 | 29 | 30 | | |
| EMERGENCY GENERATOR | | | | | | | | |
| ROTARY TRANSFORMER: MOTOR | | | | | | | | |
| " " GENERATOR | | | | | | | | |

MAIN DISTRIBUTION CABLES.

| DESCRIPTION. | CONDUCTORS. | | MAXIMUM CURRENT IN AMPERES. | | APPROX. LENGTH (load plus return feet). | INSULATED WITH. | HOW PROTECTED. |
|--------------------------------------|---------------------------|--|-----------------------------|-------|---|-----------------|----------------|
| | No. in Parallel Per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit. | Rule. | | | |
| AUX. SWITCHBOARDS AND SECTION BOARDS | | | | | | | |
| Distribution board in crew space aft | 1 | 4 | | | 40 | | |
| Distribution panel in wheel house | 1 | 4 | | | 40 | | |

LIGHTING AND HEATING, ETC., CABLES.

| DESCRIPTION. | CONDUCTORS. | | MAXIMUM CURRENT IN AMPERES. | | APPROX. LENGTH (load plus return feet). | INSULATED WITH. | HOW PROTECTED. |
|--|---------------------------|--|-----------------------------|-------|---|-----------------|----------------|
| | No. in Parallel Per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit. | Rule. | | | |
| WIRELESS | 1 | 2.5 | 4 | 15.5 | 40 | | |
| NAVIGATION LIGHTS | 1 | 2.5 | 4 | 15.5 | 40 | | |
| LIGHTING AND HEATING | | | | | | | |
| Distribution box lighting crew space aft | 1 | 4 | 10 | 22.5 | 30 | | |
| Distribution box lighting wheel house | 1 | 4 | 10 | 22.5 | 40 | V.I.R. | L.C.A. |
| lighting engine room | 1 | 1.5 | 2 | 9.5 | 50 | | |
| lighting engine room | 1 | 1.5 | 2 | 9.5 | 20 | | |
| lighting engine room | 1 | 1.5 | 2 | 9.5 | 30 | | |

MOTOR CABLES.

| ALL IMPORTANT MOTORS TO BE ENUMERATED. | No. | B.H.P. | CONDUCTORS. | | MAXIMUM CURRENT IN AMPERES. | | APPROX. LENGTH (load plus return feet). | INSULATED WITH. | HOW PROTECTED. |
|--|-----|--------|---------------------------|--|-----------------------------|-------|---|-----------------|----------------|
| | | | No. in Parallel Per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit. | Rule. | | | |
| Sanitary pump motor | 1 | 0.63 | 1 | 2.5 | 6 | 15.5 | 0. | | |
| Fresh water pump motor | 1 | 1.2 | 1 | 2.5 | 10 | 15.5 | 16. | | |
| Central heating fan motor | 1 | 0.5 | 1 | 2.5 | 2.45 | 15.5 | 16. | | |
| Air purification cargo room | 1 | | | | | | 30 | V.I.R. L.C.A. | |
| " " " " | 1 | 0.25 | 1 | 2.5 | 2 | 15.5 | 20 | | |
| " " " " | 1 | | | | | | 20 | | |
| " " " " | 1 | | | | | | 40 | | |

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.

P. J. Rotscheid
ELECTROTECHNISCH BEDRIJF
P. J. ROTSCHEID
DIRECTEUR

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Electrical Engineers.

Date. 22 DEC 1948

COMPASSES.

Minimum distance between electric generators or motors and standard compass.....

Minimum distance between electric generators or motors and steering compass.....

The nearest cables to the compasses are as follows:—

A cable carrying Ampères feet from standard compass feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

The maximum deviation due to electric currents was found to be degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

Builder's Signature. Date.....

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

Plans. Are approved plans forwarded herewith no If not, state date of approval. 22nd June 1948 and 13th October 1948

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

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.).....

The electrical equipment of this vessel has been installed under special survey in accordance with the rules.

The materials used are of good quality and design and the workmanship is good. On completion the equipment was tried under working conditions and found satisfactory.

This equipment is in my opinion suitable for a classed vessel.

Notes see 21/1/49

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ... £ 175.- When applied for, 24/12.19.48

Travelling Expenses (if any) £ 33.50 When received,19.....

H.v.d. Sluis (H.v.d. SLUIS)

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 28 JAN 1949

Assigned for minute see J.E. R.P.

5m.4.30.—Transfer. (MADE AND PRINTED IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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