

No. 204670

Rpt. 13.

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 12/11/31

Date of writing Report 8 July 1931 When handed in at Local Office Rotterdam Port of Rotterdam
 No. in Survey held at Rotterdam Date, First Survey 17 March 1926 Last Survey 30/6 1931
 Reg. Book. m/v. "MACUBA." (Number of Visits 7) Tons { Gross _____ Net _____
 on the _____
 Built at Rotterdam By whom built Mach. Fabr. & Scheepwerf "Piet Smit jr." Yard No. 469 When built 1931
 Owners Key Corona Port belonging to Gravenhage (The Hague)
 Electric Light Installation fitted by N.F. Electriciteits Mij. A.E.G. Amsterdam. Contract No. _____ When fitted 1931
 Is the Vessel fitted for carrying Petroleum in bulk Yes

System of Distribution Two wire volts, Power 110 volts.

Pressure of supply for Lighting 110 volts, Heating _____ Power direct

Direct or Alternating Current, Lighting direct

If alternating current system, state frequency of periods per second ✓

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes

Generators, do they comply with the requirements regarding rating yes, are they compound wound yes

are they over compounded 5 per cent. yes, if not compound wound state distance between each generator ✓

Where more than one generator is fitted are they arranged to run in parallel no, is an adjustable regulating resistance fitted in

series with each shunt field yes

Are all terminals accessible, clearly marked, and furnished with sockets yes, are they so spaced or shielded that they cannot be accidentally earthed,

short circuited, or touched yes Are the lubricating arrangements of the generators as per Rule yes

Position of Generators in engine room starboard, are they clear of all inflammable material yes

is the ventilation in way of the generators satisfactory yes, are they clear of all inflammable material, state distance of same horizontally from or vertically above the generators

no wood and work, are the generators protected from mechanical injury and damage from water, steam or oil yes

are their axes of rotation fore and aft yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed yes are the prime movers and

their respective generators in metallic contact yes

Main Switch Boards, where placed engine room starboard.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard same compartment

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes yes

are they protected from mechanical injury and damage from water, steam or oil yes, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards wood and work

are they constructed wholly of durable, non-ignitable non-absorbent materials yes, is all insulation of high dielectric strength and of

permanently high insulation resistance yes, if semi-insulating material is used, are all conducting parts insulated from the slab

with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework yes

and is the frame effectively earthed yes Are the fittings as per Rule regarding:— spacing or shielding of live parts

yes, accessibility of all parts yes, absence of fuses on back of board yes, proportion of omnibus

bars 20 x 5 m.m. 4 individual fuses to voltmeter, pilot or earth lamp yes, connections of switches yes

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches for each generator

a double pole switch and a double pole fuse, for each outgoing

circuit a double pole change over switch and a double pole fuse

Instruments on main switchboard two ammeters two voltmeters ✓ synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

earth lamps.

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules yes

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule yes

Cables: Single, twin, concentric, or multicore single, twin are the cables insulated and protected as per Tables IV or V of the Rules yes, per table II

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 4 ft. 5 balls

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes

Paper Insulated Cables, If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound ✓

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage yes

Support and Protection of Cables, state how the cables are supported and protected, cables in accommodations etc are supported by metal clips as per Rules, cables on deck in galv. tubes
 If cables are run in wood casings, are the casings and caps secured by screws ✓, are the cap screws of brass ✓, are the cables run in separate grooves ✓. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements yes

Joints in Cables, state if any, and how made, insulated, and protected in watertight boxes

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes state the material of which the bushes are made lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas ✓
 are their connections made as per Rule ✓

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule yes

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven none

Navigation Lamps, are these separately wired yes, controlled by separate switch and separate fuses yes, are the fuses double pole yes
 are the switches and fuses grouped in a position accessible only to the officers on watch yes
 has each navigation lamp an automatic indicator as per Rule yes

Secondary Batteries, are they constructed and fitted as per Rule none

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight yes
 are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected none fitted

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected by means of airtight boxes
through galv. pipes on deck
 where are the controlling switches situated on switchboard in Chartroom

Searchlight Lamps, No. of none, whether fixed or portable ✓, are their fittings as per Rule ✓

Arc Lamps, other than searchlight lamps, No. of none their live parts insulated from the frame or case ✓, are their fittings as per Rule ✓

Motors, are their working parts readily accessible yes, are the coils self-contained and readily removable for replacement yes
 are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material yes
 are they protected from mechanical injury and damage from water, steam or oil yes are their axes of rotation fore and aft yes
 if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type yes
 if not of this type, state distance of the combustible material horizontally or vertically above the motors and 4 ft

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule gone

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings yes
 If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Rev. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	16	110	146	390	single cylinder steam engine		
AUXILIARY	1	16	110	146	390	Klankhaut motor	soler oil above	150° F
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rate.			
MAIN GENERATOR	1	95 sq. mm	19	5.9 mm	146	156	8 m.	rubber	lead covered armoured
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR	1	95 "	19	5 "	146	156	8 "	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR									
ENGINE ROOM S.B.	1	16 "	7	2.3 "	20	53	10 "	"	"
BOILER ROOM									
AUXILIARY SWITCHBOARDS Engine Room P.	1	16 "	7	2.3 "	20	53	10 "	"	"
ACCOMMODATION									
POOPDECK	1	16 "	7	2.3 "	45	53	50 "	"	"
FORESHIP	1	16 "	7	2.3 "	12	53	290 "	"	"
ANNIDSLIP	1	25 "	7	3.6 "	45	66	190 "	"	"
WIRELESS	1	10 "	7	1.43 "	24	40	70 "	"	"
SEARCHLIGHT									
MASTHEAD LIGHTS	1	1.5 "	7	0.212 "	0.5	9.6	1208 100 "	"	"
SIDE LIGHTS	1	1.5 "	7	0.212 "	0.5	9.6	30 "	"	"
COMPASS LIGHTS	1	1.5 "	7	0.212 "	0.5	9.6	10 "	"	"
POOP LIGHTS									
CARGO LIGHTS	1	6 "	7	0.86 "	15	28	290 "	"	"
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rate.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR	2	1	35 sq. mm	19	1.84 mm	80	90	10.18 m.	rubber	lead covered armoured
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR-S	4	1	35 sq. mm	19	1.84 "	40	80	50 m.	"	"
VENTILATING FANS										

All Conductors are of annealed copper conforming to British Standard Specification No. 7.
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
 The foregoing is a correct description.

N.V. ELECTRICITEITS MAATSCHAPPIJ AEG
W. M. van der ...

Electrical Engineers.

Date *24 June 1931*

COMPASSES.

Distance between electric generators or motors and standard compass *225 feet*
 Distance between electric generators or motors and steering compass *225 feet*
 The nearest cables to the compasses are as follows:—
 A cable carrying *1.5* Ampères *9* feet from standard compass *9 ft* feet from steering compass.
 A cable carrying *1.5* Ampères *9* feet from standard compass *9* 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 *yes*
 Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *yes*
 The maximum deviation due to electric currents was found to be *nil* degrees on *any* course in the case of the standard compass, and *nil* degrees on *any* course in the case of the steering compass.

N.V. MACHINEFABRIEK & SCHEEPSWERF
 v.d. P. SMIT Jr., ROTTERDAM.

[Signature] Builder's Signature. Date

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

General Remarks (State quality of workmanship, opinions as to class, &c. *The installation has been made and fitted in accordance with the Society's Rules approved plan and certificate. The workmanship is good. The plant has been tested during a trial trip and was found working satisfactorily and meets in my opinion the approval of the Committee.*

It is submitted that this vessel is eligible for the ...
Elec Light
[Signature] 14/7/31

Total Capacity of Generators *32* Kilowatts.

The amount of Fee ... *£ 276.00* } When applied for, *10/7/31*
 Travelling Expenses (if any) £ : : } When received, *16.7.31*

[Signature]
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 21 JUL 1931*

Assigned *Elec Light*

1m, 9, 30.—7 transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

