

Rpt. 13.

No. 12010

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

12 SEP 1930

Date of writing Report 4 Sept 1930 When handed in at Local Office

Port of Amsterdam

No. in Survey held at Amsterdam Date, First Survey 6 November Last Survey 3 September 1930

Reg. Book.

8574 on the Steel M.V. "TABINTA"

(Number of Visits...)

Tons { Gross 8156  
Net 4890

Built at Amsterdam By whom built Neder Schep 114 Yard No. 202 When built 1930

Owners Thomaas M. Nedeland Port belonging to Amsterdam

Electric Light Installation fitted by Mynssens &amp; Co Amsterdam Contract No. When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution Two wire system

Pressure of supply for Lighting 220 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting direct current Power direct &amp; alternating

If alternating current system, state frequency of periods per second 50 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 Yes, 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

is the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators none and ✓, 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 In engine room

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 ✓

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 Yes none and ✓

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 none 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 none, proportion of omnibus bars Yes, 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 d.p. handle

switch with equalizer contactor and special safety device system "Groenpol"

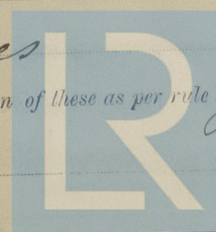
Instruments on main switchboard 4 ammeters 4 voltmeters synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system 2 earth lamps

with insulating gauge

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



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Cables: Single, twin, <sup>and</sup> multicore are the cables insulated and protected as per Tables IV or V of the Rules *yes*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *lighting 3% power 5%*

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 *None*

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 *supported by brass clips for the lead covered cables & galvanised iron clips for armoured cables*

If cables are run in wood casings, are the casings and caps secured by screws *yes*, are the cap screws of brass *yes*, are the cables run in separate grooves *yes*. 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 *no joints*

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

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 *hardwood*

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 *Emergency lighting on battery placed in steering engine room*

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 *yes*

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*, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *none*, how are the cables led *where are the controlling switches situated*

Searchlight Lamps, No. of *one*, whether fixed or portable *fixed*, are their fittings as per Rule *yes*

Arc Lamps, other than searchlight lamps, No. of *none*, are 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 *yes* and *yes*

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 *yes*

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.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	4	180	220	820	300	Diesel engine	Diesel oil	above 150°F
AUXILIARY ...								
EMERGENCY ...								
ROTARY TRANSFORMER								

## GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
4 MAIN GENERATOR ...	2	2 x 0.49850	61	0.103	650	664	100.110.150.170	rubber	Lead covered & armoured
EQUALISER CONNECTIONS ...	1	0.49850	61	0.103	300	332	50.55.75.85	"	"
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR ...									
2 ROTARY TRANSFORMER MOTOR ...	1	0.11680	37	0.064	125	130	50	rubber	Lead covered & armoured
GENERATOR ...	1	0.11680	37	0.064	120	130	20	"	"
ENGINE ROOM ...	1	0.01462	7	0.052	35	37	270	"	Lead covered & armoured
STEERING ROOM ...	1	0.01462	7	0.052	25	37	60	"	"
AUXILIARY SWITCHBOARDS ...	1	0.10090	19	0.083	110	118	200	"	"
P ...	1	0.24630	37	0.093	210	214	150	"	"
S ...	1	0.07592	19	0.072	90	97	150	"	"
FK ...	2	2 x 0.30240	37	0.103	460	480	540	"	"
EK ...	2	2 x 0.30240	37	0.103	460	480	300	"	"
HK ...	2	2 x 0.30240	37	0.103	450	480	420	"	"
ACCOMMODATION Aft ...	1	0.01046	7	0.044	25	31	540	"	"
Midship ...	1	0.03960	19	0.052	60	64	465	"	"
Forward ...	1	0.01046	7	0.044	30	31	360	"	"
Forward ...	1	0.00701	7	0.036	22	24	540	"	"
Midship ...	1	0.02214	7	0.064	40	46	110	"	"
WIRELESS ...	1	0.01214	7	0.064	42	46	390	"	"
SEARCHLIGHT ...	1	0.03960	19	0.052	60	64	120	"	"
MASTHEAD LIGHT ...	1	0.00455	7	0.029	0.5	10	450	"	"
SIDE LIGHTS ...	1	0.00144	3	0.029	0.5	7.8	60	"	"
COMPASS LIGHTS ...	1	0.00144	3	0.029	0.5	7.8	50	"	"
POOP LIGHTS ...	1	0.00455	7	0.029	0.5	10.2	800	"	"
CARGO LIGHTS ...	1	0.00455	7	0.029	1	10.2	120	"	"
ARC LAMPS ...								"	"
HEATERS ...	1	0.00455	7	0.029	15	10.2	72	"	"

## MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP ...	1	1	0.07192	19	0.072	95	97	120	rubber	Lead covered & armoured
MAIN BILGE LINE PUMPS ...	2	1	0.02214	7	0.064	45	46	60	"	"
GENERAL SERVICE PUMP ...										
EMERGENCY BILGE PUMP ...										
SANITARY PUMP ...	1	1	0.02214	7	0.064	45	46	130	"	"
CIRC. SEA WATER PUMPS ...	5	1	0.01046	7	0.044	30	31	90	"	"
CIRC. FRESH WATER PUMPS ...										
2 AIR COMPRESSOR ...	2	2	2 x 0.30240	37	0.103	475	480	250	"	"
FRESH WATER PUMP ...	2	1	0.00455	7	0.029	14	10.2	150	"	"
ENGINE TURNING GEAR ...	1	1	0.02214	7	0.064	40	46	120	"	"
ENGINE REVERSING GEAR ...										
LUBRICATING OIL PUMPS ...	2	1	0.10990	19	0.083	115	118	160	"	"
OIL FUEL TRANSFER PUMP ...	1	1	0.10990	19	0.083	115	118	210	"	"
WINDLASS ...	1	1	0.40640	61	0.093	275	280	90	"	"
WINCHES, FORWARD ...	5	1	0.07592	19	0.072	90	97	100	"	"
Winches ...	2	1	0.07592	19	0.072	92	97	120	"	"
WINCHES, AFT ...	4	1	0.07592	19	0.072	90	97	105	"	"
STEERING GEAR—										
(a) MOTOR GENERATOR ...										
(b) MAIN MOTOR ...	2	1	0.06000	19	0.064	75	83	600	"	"
WORKSHOP MOTOR ...	1	1	0.00455	7	0.029	15	10.2	72	"	"
VENTILATING FANS ...										
Low oil pump ...	1	1	0.10090	19	0.083	105	110	275	"	"
Baler fans ...	1	1	0.00455	7	0.029	15	10.2	45	"	"
oil separators ...	5	1	0.00701	7	0.036	20	24	60	"	"
Baler fuel pumps ...	2	1	0.01462	7	0.052	25	37	60	"	"
Burner pump ...	1	1	0.00455	7	0.029	15	10.2	70	"	"

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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.

MIJNSSEN & Co.  
AMSTERDAM

Electrical Engineers.

Date

#### COMPASSES.

Distance between electric generators or motors and standard compass 80 feet

Distance between electric generators or motors and steering compass 75 feet

The nearest cables to the compasses are as follows:—

A cable carrying 0.3 Ampères 1 feet from standard compass 1 feet from steering compass.

A cable carrying 15 Ampères 35 feet from standard compass 45 feet from steering compass.

A cable carrying 1 Ampères 18 feet from standard compass 20 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 course in the case of the standard compass, and degrees on course in the case of the steering compass.

N.V. NEDERLANDSCHE SCHEEPSBOUW-MAATSCHAPPIJ

*[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 built in accordance with the rules, workmanship throughout good. Tested under full working condition found working satisfactorily*

*It is submitted that  
this vessel is eligible for  
THE RECORD. Elec Light.*

*[Signature]*  
19/9/30.

Total Capacity of Generators 720 Kilowatts.

The amount of Fee ...

*594*

When applied for,

19

Travelling Expenses (if any) £

When received,

*22.9.30*

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

Committee's Minute

TUE. 30 SEP 1930

Assigned

*Elec. Light*



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