

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

-8 JUL 1936

Date of writing Report 1 Juli 1936. When handed in at Local Office 10 Port of Rotterdam.

No. in Survey held at *Flushing* Date, First Survey 25-3-36 Last Survey 30-5-1936  
Reg. Book. *M.S. "Erinna"* (Number of Visits... 10)

on the *Flissingen* Tons { Gross 6232  
Net 3590

Built at *Flissingen* By whom built *"de Schelde"* Yard No. 202 When built 1936

Owners *Peter M. J. A. van der Vliet* Port belonging to *Amsterdam*

Electric Light Installation fitted by *N.V. van Rietschalen & Houwers* Contract No. When fitted 1936

## System of Distribution

Pressure of supply for Lighting 110. ✓ volts, Heating 110. ✓ volts, Power 110. ✓ volts.

Direct or Alternating Current, Lighting Direct current. ✓ Power Direct current. ✓

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, is an adjustable regulating resistance fitted in series with each shunt field

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, on S.B. side. ✓

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

and, are the generators protected from mechanical injury and damage from water, steam or oil Yes. ✓

are their axes of rotation fore and aft

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes. ✓ are the prime movers and

their respective generators in metallic contact

Main Switch Boards, where placed near the generators, in the 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 Yes. ✓

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 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 Yes. ✓

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

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

bars, individual fuses to voltmeter, pilot or earth lamp Yes. ✓, connections of switches

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

tor double pole fuses and a double pole switch. ✓

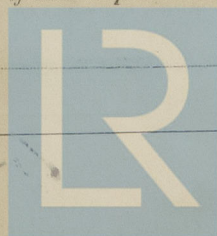
Instruments on main switchboard two ammeters two voltmeters synchronising device for paralleling purposes.

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

two 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. ✓



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Foundation



Cables: Single, twin, concentric, or multicore single 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 4 Volts  
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 in cabins lead covered; on deck lead covered and armoured in iron pipes; in engine room lead covered and armoured secured by metal clips  
If cables are 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  
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 or hard wood  
Earthing Connections, state what earthing connections are fitted and their respective sectional areas  
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  
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 two in pump room, in gas-tight boxes exterior  
are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected exterior  
where are the controlling switches situated exterior  
Searchlight Lamps, No. of portable, whether fixed or portable portable, are their fittings as per Rule Yes  
Arc Lamps, other than searchlight lamps, No. of portable, are their live parts insulated from the frame or case Yes, are their fittings as per Rule Yes  
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 no  
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  
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	2	16	110	145		one steam and one comb. engine.	Yes		
AUXILIARY									
EMERGENCY									
ROTARY TRANSFORMER									

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter. in.				
	MAIN GENERATOR.S.	1	95 p	37	1.83	150/145	10 and 20 Mtr.	rubber lead covered and armoured.	
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM								
	ACCOMMODATION								
	WIRELESS		16 p	7	1.71	60/50	150 Mtr.		
	SEARCHLIGHT		35 p	19	1.53	100/80	240		
	MASTHEAD LIGHT...		1.5 p	1	1.38		160		
	SIDE LIGHTS...		1.5 p	1	1.38		25		
	COMPASS LIGHTS...		1.5 p	1	1.38		15		
	POOP LIGHTS		1.5 p	1	1.38		200		
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	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	1	50 p	19	1.83	116/99	40 Mtr.	rubber lead covered and armoured.	
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	1	4 p	7	0.86	22/16	34		
	OIL FUEL TRANSFER PUMP	1	1.5 p	1	1.38	10/6	30		
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	(a) MOTOR GENERATOR...								
	(b) MAIN MOTOR								
	WORKSHOP MOTOR								
	VENTILATING FAN	1	4 p	7	0.86	22/16	30		
	Drill.	1	4 p	7	0.86	22/16	5		
	Lathe.	1	2.5 p	1	1.79	15/12	25		
	Grind-stone.	1	6 p	7	1.95	30/24	15		

MAX: AMP. LLOYDS. - 30/24 - TOTAL MAX: AMP.



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.

Van Rietschoten & Houwens'

Elektrotechnische Maatschappij, N.V.

Electrical Engineers.

Date

17-36

#### COMPASSES.

Distance between electric generators or motors and standard compass

70 Mtr.

Distance between electric generators or motors and steering compass

" "

The nearest cables to the compasses are as follows:—

A cable carrying 14,5 Ampères 5 Mtr. feet from standard compass 3,5 Mtr. feet from steering compass.

A cable carrying 15,5 Ampères 2,5 " feet from standard compass 2 " feet from steering compass.

A cable carrying 0,09 Ampères 0,3 " feet from standard compass 0,3 " 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 0 degrees on every course in the case of the standard

compass, and 0 degrees on every course in the case of the steering compass.

N.V. Kon. Mil. "De Schelde"

Builder's Signature.

Date

6-JUL 1936

Is this installation a duplicate of a previous case *Yes* in principle If so, state name of vessel *MV Eulota*  
*MV Etuma*

General Remarks (State quality of workmanship, opinions as to class, &c. *This installation has been*)

*fitted in accordance with the approved plan, Society's Rules and Secretary's letters, material tested as required and workmanship good. The whole has been examined under full working condition and found in order and merits in my opinion the approval of the Committee*

*Noted*

*True*

*10.7.36*

*R.L.M.*

Total Capacity of Generators 32 Kilowatts.

The amount of Fee ...

*23*  
*£ 276.-*

When applied for,

*84.7.19.36*

Travelling Expenses (if any) £

*—*

When received,

*29.7.36*

*29/7*

*Y. J. Oetova*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 14 JUL 1936

Assigned

*See other J.E. Ref. 24647*