

*M. S. Etrema*

Rpt. 13.

No. 24512

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

14 MAY 1936

Date of writing Report *4-5-1936* When handed in at Local Office *10* Port of *Rotterdam*

No. in Survey held at *Rotterdam* Date, First Survey *28.2.36* Last Survey *5.5-1936*  
Reg. Book. *"* (Number of Visits *18*)

on the *M.V. "ETREMA"*

Tons { Gross *613.6*  
Net *360.6*

Built at *Rotterdam* By whom built *Pott Drooga Mij* Yard No. *193* When built *1936*

Owners *Petroleum Mij. "La Corona"* Port belonging to *Gravenhage*

Electric Light Installation fitted by *M.V. Pott Electrotechnische Mij. v/h Loon & Co.* Contract No. *"* When fitted *1936*

System of Distribution *Two wires*

Pressure of supply for Lighting *110* volts, Heating *"* volts, Power *110* volts.

Direct or Alternating Current, Lighting *direct* Power *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. *"*, if not compound wound state distance between each generator *"*

Where more than one generator is fitted are they arranged to run in parallel *not in parallel*, 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 *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 *"* and *"*, are the generators protected from mechanical injury and damage from water, steam or oil *"*

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*

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 *"*

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 *"*, is all insulation of high dielectric strength and of permanently high insulation resistance *"*, 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 *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 *one generator*

*has a double pole switch and fuses; the other a double pole two way switch and fuses*

Instruments on main switchboard *2* ammeters *2* 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 *pilot 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 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 5 volt

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 yes

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 engine-room iron cable runs; on deck galvanized iron tubes

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 in metal boxes with screwed connections

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 by means of screwed clips

are their connections made as per Rule yes

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 yes

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 yes

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected yes

how are the cables led yes

where are the controlling switches situated yes

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

Arc Lamps, other than searchlight lamps, No. of yes, 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 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

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.

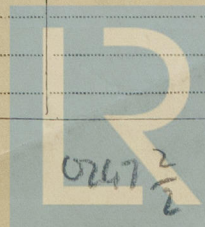
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	16	110	145	300	Steam	Oil	
AUXILIARY	1	16	110	145	300	STEAM.	Oil	
EMERGENCY	2	100 Kw each	110 v.	145	300	4 cyl. 400 Diesel engine	Byzans	1747 Ans.
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.						
	MAIN GENERATOR	1	95	37	1.83	145	1800	rubber	Lead and steel arm.		
	EQUALISER CONNECTIONS										
	AUXILIARY GENERATOR	1	95	37	1.83	145	1800				
	EMERGENCY GENERATOR										
	ROTARY TRANSFORMER										
	AUXILIARY SWITCHBOARDS										
	ENGINE ROOM	1	10	7	1.32	35	40				
	BOILER ROOM	1	10	7	1.32	35	40				
	ACCOMMODATION										
	navigation	1	10	7	1.32	5	176				
	workshop	1	35	19	1.62	80	70				
	fore-ship	1	16	7	1.62	8	300				
	amid-ship	1	16	7	1.62	32	154				
	aft-ship	1	16	7	1.62	29	56				
	WIRELESS	1	16	7	1.62		212				
	SEARCHLIGHT	1	35	19	1.62		330				
	MASTHEAD LIGHT	1	14	3	0.74	0.5	110				
	SIDE LIGHTS	1	14	3	0.74	0.5	28				
	COMPASS LIGHTS	1	14	3	0.74	0.5	10				
	POOP LIGHTS	1	14	3	0.74	0.5	150				
	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	70	37	1.62	104	450	rubber	Lead and steel arm.		
	ENGINE REVERSING GEAR										
	LUBRICATING OIL PUMPS										
	OIL FUEL TRANSFER PUMP	1	14	3	0.74	6	35				
	WINDLASS										
	WINCHES, FORWARD										
	WINCHES, AFT										
	STEERING GEAR										
	(a) MOTOR GENERATOR										
	(b) MAIN MOTOR										
	WORKSHOP MOTOR										
	VENTILATING FANS	1	4	7	0.91	16	38				
	Grinding mach	1	6	7	1.12	24	20				
	Lathe motor	1	2	3	0.91	12	22				
	Drill mach. motor	1	4	7	0.91	16	10				
	Oil separator	1	4	7	0.91	16	48				



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*The foregoing is a correct description.*

*Electrical Engineers.*

Date 8 Oct 1936

## COMPASSES.

Distance between electric generators or motors and standard compass 15

Distance between electric generators or motors and steering compass ..... 1.625

*The nearest cables to the compasses are as follows:—*

A cable carrying 0.2 Amperes 21 feet from standard compass 2' feet from steering compass.

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

*A cable carrying ..... Amperes ..... 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 nihil degrees on every course in the case of the standard compass, and nihil degrees on every course in the case of the steering compass.

AMSTERDAMSCH-DEUTSCH-MAATSCHAPPIJ  
Directeur.

Builder's Signature. Date. 12. 5. 36

Is this installation a duplicate of a previous case yes If so, state name of vessel MV EULOTA  
William F. Howard, Towel: 671

*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

14 Feb  
Hm

*Total Capacity of Generators*..... **32.**..... *Kilowatts.*

The amount of Fee ... ..

f 276:

When applied for,

19.....

Travelling Expenses (if any) £

4.

When received,  
29.5-3672

*Surveyor to Lloyd's Register of Shipping.*

Committee's Minute FRI. 22 MAY 1936

*Assigned*

See Rot. I E 34572