

25 JAN 1932

1932

Rpt. 13.

No. 20869

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

25 JAN 1932

Date of writing Report 15-1-1932 When handed in at Local Office 19 Port of Rotterdam

No. in Survey held at Schiedam Date, First Survey 8-5-31, Last Survey 12-1-1932  
Reg. Book. (Number of Visits... 24...)

on the M. S. "Malvina" Tons { Gross 8249.36  
Net 4782.10

Built at Rotterdam By whom built Wilton-Frywood Yard No. 420 When built 1931

Owners Petroleum Mty. "La Corona" Port belonging to Gravenhage

Electric Light Installation fitted by W. N. K. Hoos, A. Elck Mty Contract No. When fitted 1931

Is the Vessel fitted for carrying Petroleum in bulk Yes.

System of Distribution double wire system

Pressure of supply for Lighting 110 volts, Heating — 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 —

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

Position of Generators In engine room, are they clear of all inflammable material Yes

is the ventilation in way of the generators satisfactory Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators no woodwork 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 between dynamos

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 some 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 Yes and Yes

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 micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework —

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 double pole with double fuses, quick latched knife fall over switches.

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 by 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.



005075-005081-0099 1/2

0099 2/2

**Cables:** Single, twin, concentric, or multicore *single twin* are the cables insulated and protected as per Tables IV or V of the Rules *Yes 24a III*

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load *3 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, *cables are protected by lead and galvanised armour, supported on steel strips on the decks and masts protected by galvanised 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 *no joints*

**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 \_\_\_\_\_

**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 in chartroom*, 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*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *airtight boxes*, how are the cables led *through galvanised 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 \_\_\_\_\_

**Are Lamps,** other than searchlight lamps, No. of \_\_\_\_\_, 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 *woodwork* if not of this type, state distance of the combustible material horizontally or vertically above the motors \_\_\_\_\_ and \_\_\_\_\_

**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.

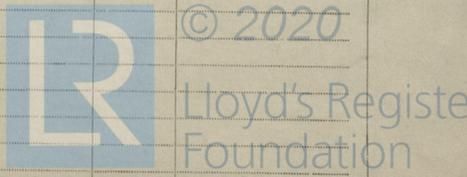
DESCRIPTION OF GENERATOR.	No. of	RATED AT			Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.
MAIN	1	16	110	145	390	Steam		
AUXILIARY	1	16	110	145	390	Motor	gas oil	above 150° F.
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.			COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length. (Lead and Return.)	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.				
MAIN GENERATOR	1	95	19	5	146	156	8	rubber	Lead covered & armoured.	
EQUALISE CONNECTIONS										
AUXILIARY GENERATOR	1	95	19	5	146	156	8	"	"	
EMERGENCY GENERATOR										
ROTARY TRANSFORMER MOTOR GENERATOR										
ENGINE ROOM	1	16	7	2.3	20	53	10	"	"	
BOILER ROOM										
AUXILIARY SWITCHBOARDS										
Eng. room Part.	1	16	7	2.3	20	53	10	"	"	
ACCOMMODATION										
Foredeck	1	16	7	2.3	45	53	50	"	"	
Fore ship	1	16	7	2.3	12	53	290	"	"	
Amidships	1	25	7	3.6	45	66	190	"	"	
WIRELESS	1	10	7	1.43	24	40	70	"	"	
SEARCHLIGHT										
MASTHEAD LIGHT	1	1.5	7	0.212	0.5	9.6	120-180	"	"	
SIDE LIGHTS	1	1.5	7	0.212	0.5	9.6	10	"	"	
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.)	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.				
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	19	1.84	80	80	10-18	"	"	
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	4	1	35	19	1.84	40	80	50	"	"	
VENTILATING FANS	24										
Cab. repair etc.	1										



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. W. N. HOOS & Co's**  
**ELECTRICITEITS MAATSCHAPPIJ**

Electrical Engineers.

Date *January 1932*

*W. N. Hoos*  
 DIRECTEUR.

**COMPASSES.**

Distance between electric generators or motors and standard compass *225 ft.*

Distance between electric generators or motors and steering compass *225 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying *1.5* Ampères *9* feet from standard compass *9* 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 *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.

**WILTON-FIJENOORD.**  
 (N.V. WILTON'S Machinefabriek en Scheepswerf  
 (WILTON'S Engineering & Slipway Co.)  
 Maatschappij voor Scheeps- en Werktuigbouw  
 „FIJENOORD“ N.V.)

Builder's Signature.

Date.

*W. N. Hoos*

Is this installation a duplicate of a previous case *Yes* If so, state name of vessel *Maamba - Mauna Be.*

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

*It is submitted that this vessel is eligible FOR THE RECORD.*

*Elec Light*  
*DL 26/1/32.*

Total Capacity of Generators *32.* Kilowatts.

The amount of Fee ... *£ 246.00* When applied for, ...  
 Travelling Expenses (if any) £ *—* When received, *26.2.32*

*W. H. Bourne*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *Fri, 29 JAN 1932*

Assigned *Elec. Light*

Im. 11.20.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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