

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

4 AUG '06

Date of writing Report 30 April 1906 When handed in at Local Office 10 Port of Amsterdam

No. in Survey held at Amsterdam Date, First Survey 1 April Last Survey 17 July 1906
Reg. Book. (Number of Visits 24)

on the Single Screw Motor Vessel "MIRALDA" Tons { Gross 2002
Net 4746

Built at Amsterdam By whom built N.V. Nederl. Scheepst⁴ Yard No. 236 When built 1906

Owners N.V. Petroleum M⁴ La Carona Port belonging to 's Gravenhage

Electric Light Installation fitted by N.V. Groenweld. v. d. Poll & Co Contract No. When fitted 1906

Is the Vessel fitted for carrying Petroleum in bulk Yes

System of Distribution Double wire

Pressure of supply for Lighting 110 volts, Heating 110 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 temperature rise 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

Have certificates of test results for machines under 100 kw. been submitted and approved Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing

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 Motorroom 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 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 Motorroom on S B side

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 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

is it of an approved type 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

is the non-hygroscopic insulating material of an approved type 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, temperature rise of omnibus bars Yes

individual fuses to voltmeter, pilot or earth lamp Yes, are moving parts of switches alive in the "off" position No

are all screws and nuts securing connections effectively locked Yes, are any fuses fitted on the live side of switches No

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

Are turbine driven generators fitted with emergency trip switch as per rule Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material Yes

Instruments on main switchboard 2 ammeters 2 voltmeters synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Two lamps in serie connected with the earth

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

are the fusible cutouts of an approved type Yes, have the reversed

current protection devices been tested under working conditions **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 *Diff Types* are the cables insulated and protected as per Tables IV, V, X or XI of the Rules *Yes*

If the cables are insulated otherwise than as per Rule, are they of an approved type **Fall of Pressure**, state maximum between bus bars and any point of the installation under maximum load *2 Volts for lights 5 V. for Power* **Cable Sockets**, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets *Yes* **Paper Insulated and Varnished Cambric Insulated Cables.**

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound *none*, or waterproof insulating tape *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* Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit *Yes*

Support and Protection of Cables, state how the cables are supported and protected *Steel plates and fixed with galvanized iron clips and brass screws*

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, 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 *not applicable*

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*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *two lamps in pumprooms protected by gaslight lockup boxes outside the pumproom protected by tubes where are the controlling switches situated on navigation board* are all fittings suitably ventilated *Yes* are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials *Yes*

Heating and Cooking Appliances, are they constructed and fitted as per Rule *none* are air heaters constructed and fitted as per Rule *none*

Searchlight Lamps, No. of *None*, whether fixed or portable *Yes*, are their fittings as per Rule

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

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 *none* if not of this type, state distance of the combustible material horizontally or vertically above the motors

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing *none* **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* are all fuses of the filled cartridge type *Yes* are they of an approved type *Yes*

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule *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	146		Diesel engine	Crude oil above 150° F	
AUXILIARY	1	16	110	146		Steam engine	Steam engine	
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 Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rate.			
MAIN GENERATOR	1	95	19	2.53	146	150	16 Meters	Rubber lead covered	Not armoured
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR	1	95	19	2.53	146	150	10 Meters	"	" " " " "
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
MOTOR GENERATOR									
ENGINE ROOM	1	10	7	1.35	25	40	30 "	"	" " " " "
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
Distribution Box Power	1	35	19	1.53	70	70	50 "	"	" " " " "
Sockets aft	1	10	7	1.35	20	40	30 "	"	" " " " "
ACCOMMODATION aft Port.	1	10	7	1.35	10	40	70 "	"	" " " " "
" " SB	1	10	7	1.35	10	40	30 "	"	" " " " "
Midship	1	16	7	1.7	36	40	170 "	"	" " " " "
Foreship	1	16	7	1.7	10	40	350 "	"	" " " " "
Navigation	1	10	7	1.35	35	40	190 "	"	" " " " "
WIRELESS	1	16	7	1.7	37	40	180 "	"	" " " " "
SEARCHLIGHT	1	35	19	1.53	70	70	300 "	"	" " " " "
MASTHEAD LIGHT	1	1.5	1	1.30	0.5	10	120 "	"	" " " " "
SIDE LIGHTS	1	1.5	1	1.30	0.5	10	50 "	"	" " " " "
COMPASS LIGHTS	1	1.5	1	1.30	0.5	10	60 "	"	" " " " "
POOP LIGHTS	1	1.5	1	1.30	0.5	10	170 "	"	" " " " "
CARGO LIGHTS									
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 Nominal 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	1	1	50.	19	1.23	100	125	22 Meters	Rubber lead covered	Not 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										
VENTILATING FANS	1	1	2.5	1	1.70	12	15	50 "	"	" " " " "
Pump pumps	1	1	2.5	1	1.70	8	15	10 "	"	" " " " "
oil separator	1	1	4	7	0.25	16	22	52 "	"	" " " " "
Drill	1	1	4	7	0.25	16	22	10 "	"	" " " " "
Rathe	1	1	2.5	1	1.70	12	15	8 "	"	" " " " "
Spinding	1	1	6	7	1.05	24	30	8 "	"	" " " " "

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

P.P.
[Signature]
Greenshill & Co

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass *75 M*

Distance between electric generators or motors and steering compass *73 M*

The nearest cables to the compasses are as follows:—

A cable carrying *0.1* Ampères *2 Meter* feet from standard compass *2 Meter* feet from steering compass.

A cable carrying _____ Ampères _____ feet from standard compass _____ 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 _____

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted _____

The maximum deviation due to electric currents was found to be *nil* degrees on _____ course in the case of the standard compass, and *nil* degrees on _____ course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case *Yes* If so, state name of vessel *Yes MV Maloma Ans up 13698*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The installation has been constructed under special survey to approved plans in accordance with the Society's rules and Secretary's letters Material & workmanship good Tested installation under full working power found good

Noted

Inm

5.8.36

Total Capacity of Generators *32* Kilowatts.

The amount of Fee ... *£ 276* : When applied for, _____ 19____

Travelling Expenses (if any) £ : : When received, *7/8. 19 36* *7/8.*

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

Committee's Minute

FRI. 7 AUG 1936

Assigned

See Ans 76 13768

2m.534.—Transfer. The Surveyors are requested not to write on or below the space for Committee's Minute.



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