

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office -9 JUL 1931

Date of writing Report 29 June 1931 When handed in at Local Office 19 Port of Amsterdam

No. in Survey held at Forchol Date, First Survey 12 May Last Survey 25 June 1931
Reg. Book. (Number of Visits 4)

on the Single Screw Motor Vessel "NEPTUNES" Tons { Gross 420.15
Net 205.79

Built at Forchol By whom built S. Smit & Zoon Yard No. 75 When built 1931

Owners S. J. Onnes Port belonging to Groningen

Electric Light Installation fitted by Technisch Bureau Hofman Contract No. When fitted 1931
Huyzenand

Is the Vessel fitted for carrying Petroleum in bulk no

System of Distribution Double wire system

Pressure of supply for Lighting 24 volts. Heating ✓ volts, Power 110 (wires) 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. 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

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 Motor 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 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 Motor 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 ✓ 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 micaite 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 Yes, proportion of omnibus bars ✓, individual fuses to voltmeter, pilot or earth lamp Yes, connections of switches Yes

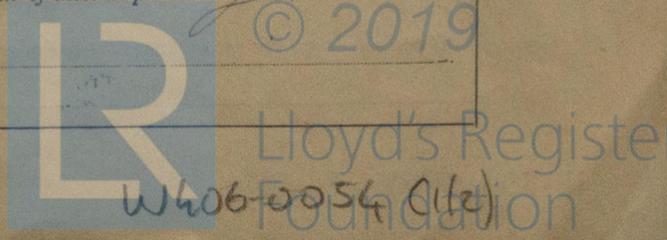
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For the generators double pole fuses and double pole link switch and for every outgoing main circuit double pole fuses & double pole link switches

Instruments on main switchboard 1 light 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 ✓

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 wire* 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 *1 volt per foot*

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 *galvanized iron clips with brass screws for armoured cables brass clips with brass screws for lead covered cables*
 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 *none*. 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 *✓*

Joints in Cables, state if any, and how made, insulated, and protected *no joints made*

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands *yes, 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 *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 *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 *no*
 how are the cables led
 where are the controlling switches situated *✓*

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

Arc 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 *no*, 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 *Debrevo*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *none*

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	1	24/27.5	36	1600	Belt from Steam engine	Gasolene	above 150° F
AUXILIARY	1	1	24/27.5	36	1000	Auxiliary Motor	"	"
EMERGENCY	1	20.7	115.	180	500	Auxiliary Motor	"	"
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.			
MAIN GENERATOR	1	0.0224	7	0.064	36	46	15	rubber	armoured lead covered
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR	1	0.0224	7	0.064	36	46	30	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	1	0.0022	1	0.064	6	12.9	14	"	"
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
Battery	1	0.0146	7	0.058	15	3.2	25	"	"
Compass	1	0.0070	7	0.036	4	2.4	120	"	"
Forward	1	0.0146	7	0.058	10.8	3.2	140	"	"
ACCOMMODATION									
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT	1	0.0070	7	0.036	4	2.4	120	"	"
SIDE LIGHTS	1	0.0070	7	0.036	1.5	2.4	215	"	"
COMPASS LIGHTS	1	0.0022	1	0.064	1.35	12.9	42	"	"
POOP LIGHTS	1	0.0322	1	0.064	1.35	12.9	90	"	"
CARGO LIGHTS									
ARC LAMPS									
HEATERS									

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	0.0146	7	0.058	3.2	30	60	rubber	lead covered rammed
MAIN BILGE LINE PUMPS	1	1	0.0146	7	0.058	3.7	30	61	"	"
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD	1	1	0.0600	14	0.064	20	42	140	"	"
WINCHES, AFT	1	1	0.0600	14	0.064	20	42	140	"	"
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										

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.

**TECHNISCH BUREAU
 HOFMAN** *J. Hofman*

Electrical Engineers. Date _____

COMPASSES.

Distance between electric generators or motors and standard compass *60 feet.*
 Distance between electric generators or motors and steering compass *55 feet.*
 The nearest cables to the compasses are as follows:—
 A cable carrying *4.5* Ampères *1* feet from standard compass *7* 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 *no* If so, state name of vessel _____

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

The Electric installation has been fitted in accordance with the rules. workmanship good. The whole has been tested under full working condition found working satisfactory.

It is submitted that this record is due for THE RECORD.

Elec. Dept

J. M. 11/7/31

Total Capacity of Generators *23* Kilowatts.

The amount of Fee	£ <i>60</i> —	:	When applied for,	_____ 19____
Travelling Expenses (if any)	<i>30</i>	:	When received,	<i>28.7.31</i>

J. M. 11/7/31
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *24 JUL 1931*

FRI. 8 JAN 1932
 TUE. 26 JAN 1932

Assigned *Elec. Dept*

Am. 9.30.—Transfer. (The Surveys are requested not to write on or below the space for Committee's Minutes.)

