

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

30 DEC 1926

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No. in Survey held at AMSTERDAM Date, First Survey 2 June Last Survey 17 December 1926
Reg. Book. (Number of Visits... 18)

--- on the Steel Single Screw Motorship "PHOBOS" Tons { Gross 7412
Net 4235

Built at Amsterdam By whom built Nederl. Scheepsbouw My Yard No. 181 When built 1926

Owners Nederl.- Ind. Tankstoomboot My. Port belonging to 's-Gravenhage

Electric Light Installation fitted by N. V. Groeneveld, v. d. Poll & Co's Contract No. - When fitted 1926
Electrotechnische Fabriek

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 Yes ✓

Generators, do they comply with the requirements regarding overload 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 Yes ✓, is an adjustable regulating resistance fitted in series with each shunt field -

Are all terminals accessible and clearly marked Yes ✓, are they so spaced or shielded that they cannot be accidentally earthed, or short circuited -

Position of Generators The three power dynamos on the engine floor at S.B. side
" two light " on the S.B. platform in the 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 Yes ✓

are their axis 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 The power switchboard against the front bulkhead of engine room.
The lightw. at S.B. side on S.B. platform
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 No ✓

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, incombustible 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 connected to one pole insulated from the slab with mica or micaite and the slab similarly insulated from its framework - and is the frame effectively earthed -

Are the following fittings as per Rule, viz.: - spacing or shielding of live parts Yes ✓, accessibility of all parts Yes ✓, absence of fuses on back of board No ✓, 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 dynamos
one double pole knife switch for switching in one pole of the dynamo and the equalizer and a reverse current automatic switch for the other pole.

For the circuits: a double pole knife switch and a double pole handle fuse.
Instruments on main switchboard 3 power ammeters & power voltmeters synchronising device for paralleling purposes.
& light & light

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Two lamps
connected in series. The series connecting point connected to the earth.

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

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes ✓

Single & twin
Insulation of Cables, state type of cables, single or twin *are the cables insulated and protected as per Tables III or IV of the Rules* *yes*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *2%*

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 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 *fixed on perforated steel plate 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 VI *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 *connection boxes, provided of cable glands*

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 Positions, 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 *vulcan fibre and 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 *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*, are separate screens provided for the use of oil and electric side lights *yes*

are separate oil lanterns provided for the mast head lights and side lights *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 *over the normal bulwark is made on iron box with a glass window, how are the cables led outside the spaces*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *over the normal bulwark is made on iron box with a glass window, how are the cables led outside the spaces*

where are the controlling switches situated *in the midship*

Searchlight Lamps, No. of *2*, whether fixed or portable *fixed*, are their fittings as per Rule *yes*

Are Lamps, other than searchlight lamps, No. of *2*, 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 axis 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 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 POWER	3	32	110	290	250	Diesel engine		
AUXILIARY	1	14	110	127	440	Kromholzmotor		
EMERGENCY	1	14	110	127	400	Steam dynamo		

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...								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM								
	main generator power								
	pos. pole	1	0.5	61	0.103	290	42	rubber	steel wire
	neg. pole	1	0.5	61	0.103	290	42		
	equalizer	1	0.147	37	0.072	-	42		
	main generator light								
	pos. pole	1	0.1168	37	0.064	127	120		
	neg. pole	1	0.1168	37	0.064	127	120		
	equalizer	1	0.039	19	0.052	-	120		
	WIRELESS	2	0.0146	7	0.052	30	640		
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	0.00455	7	0.029	1	360		
	SIDE LIGHTS...	2	0.00455	7	0.029	1	54		
	COMPASS LIGHTS...	2	0.00299	3	0.036	0.5	24		
	POOP LIGHTS	2	0.00299	3	0.036	10	120		
	CARGO LIGHTS	2	0.00299	3	0.036	10	60		
	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	2	0.1478	37	0.072	130	240	rubber	steel wire
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	2	0.1478	37	0.072	140	120		
	OIL FUEL TRANSFER PUMP	2	0.0396	19	0.052	60	120		
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR	2	0.07592	19	0.072	190	300		
	WORKSHOP MOTOR								
	VENTILATING FANS								
	cooling pump	4	0.1478	37	0.072	280	36		
	workshop motor	2	0.0146	7	0.052	24	36		
	"	2	0.0146	7	0.052	24	50		
	"	2	0.0146	7	0.052	24	56		
	oil purifier	2	0.0146	7	0.052	24	120		
	"	2	0.0146	7	0.052	24	120		
	refrigerating engine	2	0.07592	19	0.072	95	260		

