

TUE JUL 17 1923

No. 15573

Rpt. 13.

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

TUE JUL 17 1923

Date of writing Report 5th July 1923 When handed in at Local Office 19 Port of HAMBURG

No. in Survey held at Rostock Date, First Survey 8th May Last Survey 4th June 1923
 (Number of Visits...9...)

Reg. Book. on the Deck to "Grebe" Tons { Gross 6567
 Net 3994

Built at Rostock By whom built Acc. Ges. Neptun Yard No. 377 When built 1923

Owners Carl Wohlenberg Port belonging to Hamburg

Electric Light Installation fitted by Schiffs-Installation, A. G. Contract No. _____ When fitted 1923

System of Distribution Single wire with full return, in vicinity of compasses double wire.

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 no, is an adjustable regulating resistance fitted in series with each shunt field yes

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

Position of Generators Engine room Sbb. side Are the lubricating arrangements of the generators as per Rule yes

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 are the prime movers and

Earthing, are the bedplates and frames of the generating plant efficiently earthed yes

their respective generators in metallic contact yes

Main Switch Boards, where placed Engine room Sbb. 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 ✓ and ✓

are they constructed wholly of durable, incombustible non-absorbent materials yes (marble), 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 micanite and the slab similarly insulated from its framework yes

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 yes, proportion of omnibus bars each of 35 x 5 mm

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 2 single pole link main switches, for each outgoing circuit on single pole link switch,

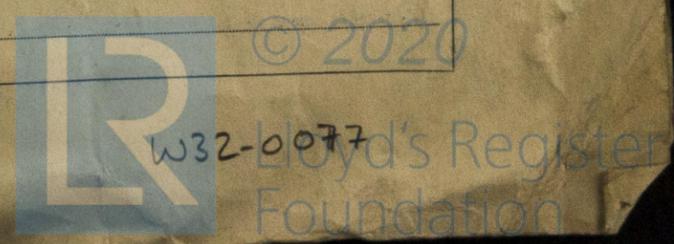
8 change over switches for engine room lights.

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 2 control lamps.

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.



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	10	115	90	450	2 Cylinder steam engine direct coupled.	✓	✓	
AUXILIARY	1	10	115	90	450		✓	✓	
EMERGENCY									
ROTARY TRANSFORMER	1	1.1	110	10	3000				

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	50 sq. mm	19	1.85 mm	700 100	3 m	rubber	lead covered and armoured
	AUXILIARY GENERATOR	2	50	19	1.85	700 100	3	"	"
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER	1	6	1	2.25	20	60	"	"
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	1	1.5	1	1.4	46	40	"	"
	BOILER ROOM	1	1.5	1	1.4	46	30	"	"
	Office ships (over)	1	4	1	2.25	15	60	"	"
	Eng. Room etc.	1	10	7	1.35	25	10	"	"
	Galton etc.	1	35	19	1.55	50	50	"	"
	Navigation lamps (Charlton)	1	4	1	2.25	15	65	"	"
	WIRELESS	1	60 sq. mm	1	2.25 mm	20	60 m	rubber	lead covered and armoured
	SEARCHLIGHT								
	MASTHEAD LIGHT	2	1.5	1	1.4	46	75	"	"
	SIDE LIGHTS	2	1.5	1	1.4	46	10	"	"
	COMPASS LIGHTS	2	1.5	1	1.4	46	15	"	"
	POOP LIGHTS	2	1.5	1	1.4	46	60	"	"
	CARGO LIGHTS	1	2.5	1	1.8	20	30	"	"
	ARC LAMPS	1	4	1	2.25	15	30	"	"
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	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								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR	1	2.5 sq. mm	1	1.8 mm	10	6 m	rubber	lead covered & armoured.
	VENTILATING FANS								

Insulation of Cables, state type of cables, single or twin *single* 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 *abt. 4 lbs.*

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 *✓*

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! *Armoured cables secured by galvanized clips, where exposed to mechanical risk by iron coverings, in accommodation rooms laid in wooden casings.*
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 secured 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 *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 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 *lead*.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *Generators, workshops motor and lamps with the same sectional area as the corresponding conductors, with the exception of lamps in the vicinity of compasses (double wire) are their connections made as per Rule* *yes*.

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule *✓*

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*.

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 *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 *none*.

✓, how are the cables led

where are the controlling switches situated *✓*

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

Are Lamps, other than searchlight lamps, No. of *5*, 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 *✓*, 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 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. *✓*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *✓*

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.

„Schinag“
 Schiff-Installation Aktiengesellschaft
 Zweig Niederelbe Hamburg

Electrical Engineers.

Date 5th July 1923.

COMPASSES.

Distance between electric generators or motors and standard compass abs. 40 m
 Distance between electric generators or motors and steering compass 38
 The nearest cables to the compasses are as follows:—
 A cable carrying 0.5 Ampères close to feet from standard compass close to 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 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 2-3 degrees on all course in the case of the standard compass, and 2-3 degrees on all course in the case of the steering compass.

Neptun
 Schiffswerft u. Maschinenfabrik

B. Jentzsch *H. W. W. W. W. W.*

Builder's Signature.

Date 5th July 1923.

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, &c.)

Workmanship and material are of best quality. As the conductors used are of the German Standard the Society's Rules respecting conductors have been applied generally. The Electric Installation is otherwise made and fitted in conformity with the requirements of the Rules and eligible in my opinion for the record of "Electric Light"

It is submitted that
 this vessel is eligible for
 THE RECORD. *Electric Light*
10/8/23

Total Capacity of Generators 20. Kilowatts

The amount of Fee £ 14 : 10 : 6 July 1923
 Travelling Expenses (if any) £ : : 35. 7. 23
6/6

M. Golke
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned

Im. 9. 22.—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)