

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 27th Febr. 1926 When handed in at Local Office 19 Port of HAMBURG Received at London Office 5 - MAR 1926

No. in Survey held at HAMBURG Date, First Survey 19th Nov. 1925 Last Survey 17th Febr. 1926
Reg. Book. 40723 on the Steel Sc. Motor V. "RENSBURG" (Number of Visits 13)

Built at HAMBURG By whom built VULCANWERKE A.G. Yard No. 639 When built 1926
Tons { Gross 6200
Net 3716

Owners DEUTSCH-AUSTRIAL. DAMPSCIFFS. GES. Port belonging to HAMBURG

Electric Light Installation fitted by SECHINAG. HAMBURG Contract No. When fitted 1926

System of Distribution two wire with direct current for power - single wire with full return for lighting

Pressure of supply for Lighting 110 volts, Heating volts, Power 220 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 yes, 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 Are the lubricating arrangements of the generators as per Rule yes

Position of Generators Engine room 26 side. Emergency ret. 26. Main deck in separate compartment.
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 Engine room 26 side. emergency ret. close to petrol separate compartment
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

and is the frame effectively earthed yes Are the fittings as per Rule regarding:— spacing or shielding of live parts , 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

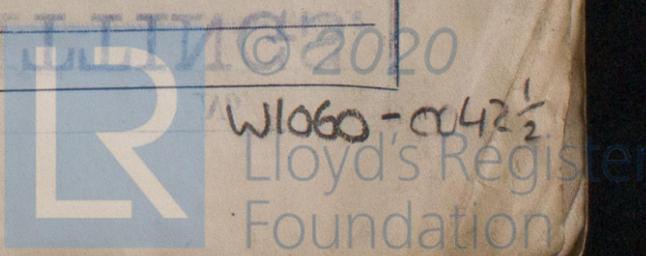
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For each generator: A fuse on each pole and a double-pole linked switch. For each outgoing circuit a fuse on each pole and a single pole change-over switch on one pole

Instruments on main switchboard 3 ammeters 3 voltmeters synchronising device for paralleling purposes. Voltmeter with Ohm.

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



W1060-0042 1/2

The German Standards have been approved

Cables: Single, twin, concentric, or otherwise *yes* are the cables insulated and protected as per Tables IV or V of the Rules *generally*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *about 5 volts for power & 2 volts for lights*

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 *no paper insulates cables*

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 *no*

Support and Protection of Cables, state how the cables are supported and protected *supported on rollers, which they are exposed to mechanical damage they are carried on iron channel bars*

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, if lights are fitted, are the cables and fittings in accordance with the special requirements *no*

Joints in Cables, state if any, and how made, insulated, and protected *water tight joint boxes*

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 *for light only. some installation no conductor systems*

are their connections made as per Rule *yes*

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 *driven by solid injection diesel motor with hand starting arrangement*

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 *no*

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 *no*

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 *no*

where are the controlling switches situated *no*

Searchlight Lamps, No. of *1*, whether fixed or portable *portable*, are their fittings as per Rule *yes*

Arc Lamps, other than searchlight lamps, No. of *0*, are their live parts insulated from the frame or case *no*, are their fittings as per Rule *no*

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 *no*

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 *steel mesh*

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 *no*

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.	Amperes.		Fuel Used.	Flash Point of Fuel.		
MAIN	2	220	230	425	230-260	oil	170° F		
AUXILIARY	1	10	115	87	200	oil			
EMERGENCY	1	10	115	87	200	oil			
ROTARY TRANSFORMER	2	20	115	174	1500	oil			

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	242	186	37	2.5	435	2 x 2-38		
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR	1	50	19	1.85	87	2 x 6		
	ROTARY TRANSFORMER	2	70	19	2.15	115	2 x 7-18		
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	4	2.45	1	1.8	6	250		
	BOILER ROOM								
	ACCOMMODATION								
	Station No. 1	1	6	1	2.75	20			
	" " 2	1	6	1	2.75	10			
	" " 3	1	6	1	2.75	18			
	" " 4	1	6	1	2.75	7			
	WIRELESS	1	6	1	2.75	25	50		
	SEARCHLIGHT	1	16	7	1.7	20	100		
	MASTHEAD LIGHT	2	1.5	1	1.4	2	250-100		
	SIDE LIGHTS	2	1.5	1	1.4	2	250		
	COMPASS LIGHTS	2	1.5	1	1.4	2	250		
	POOP LIGHTS	2	1.5	1	1.4	2	250		
	CARGO LIGHTS	2	1.5	1	1.4	2	250		
	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	1	2.25	6	2.25	27	2 x 20		
	MAIN BILGE LINE PUMPS	2	16	7	1.7	20	2 x 17-38		
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP	1	2.25	7	2.1	20	7		
	CIRC. SEA WATER PUMPS	1	2.25	6	2.25	27	2 x 25		
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP	1	2.25	1	2.25	17	2 x 15		
	ENGINE TURNING GEAR	2	6	1	2.75	26	2 x 5-8-26		
	ENGINE REVERSING GEAR	2	3.5	19	1.55	72	2 x 19	rubber	lead covered and armoured.
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP	1	2.5	19	1.55	67	2 x 18		
	WINDLASS	1	1.85	37	2.5	200	2 x 19		
	WINCHES, FORWARD	2	50	19	1.85	130	2 x 15-37		
	WINCHES, AFT	6	50	19	1.85	130	2 x 15-35		
	STEERING GEAR								
	(a) MOTOR GENERATOR	2	1.85	37	2.5	172	2 x 7-16		
	(b) MAIN MOTOR	1	9.5	19	2.5	120	2 x 19		
	WORKSHOP MOTOR	1	2.5	1	1.8	18	2 x 9		
	VENTILATING FANS	1	2.5	1	1.8	18	2 x 9		
	Exhaust Pump	1	4	1	2.25	16.5	2 x 6		
	Exhaust Compressor	1	16	7	1.7	49	2 x 18		
	Exhaust Purifier	1	16	7	1.7	20	2 x 15		
	Oil Fuel Separator	1	2.5	1	1.8	24	2 x 12		
	Lubricating Purifier	1	2.5	1	1.8	24	2 x 12		

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.

„Seitling“
 Schiff-Installation-Gesellschaft
 Zweigniederlassung Hamburg
 V. Raschen

Electrical Engineers.

Date 27/2/26.

COMPASSES.

Distance between electric generators or motors and standard compass *about 20 m* *double wired in vicinity of*
 Distance between electric generators or motors and steering compass *compass*
 The nearest cables to the compasses are as follows:—
 A cable carrying *0.5* Amperes *close to* feet from standard compass *close to* feet from steering compass.
 A cable carrying *•* Amperes *•* feet from standard compass *•* feet from steering compass.
 A cable carrying *•* Amperes *•* 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 with*
 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 *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 27/2/26

Is this installation a duplicate of a previous case *no* If so, state name of vessel *"Zwieburg"*

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

Installations are of good quality. As the conductors used are of the German Standards the British Rules respecting conductors have been applied generally. The Electric Installation is fitted in accordance with the approved plans the Secretary's letter and otherwise in conformity with the requirements of the Rules and is eligible in my opinion for record of 'ELEC. LIGHT.'

It is submitted that
 this vessel is eligible for
 THE RECORD ELEC. LIGHT.

AWD
10/3/26
MS

Total Capacity of Generators *310* Kilowatts.

The amount of Fee ...	£ 39 : 5	:	When applied for,	17. Feb. 1926.
Travelling Expenses (if any) £	:	:	When received,	4. 3. 1926.

Friedrich Witt
 Surveyor to Lloyd's Register of Shipping.

Im. 1. 26.—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Committee's Minute **FRI. 12 MAR 1926**
 Assigned *Elec Light*