

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

No. 16423

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 14th Nov. 1915 Last Survey 17th February 1926
Reg. Book. 40723 on the Steel S.S. Motor V. "RENSBURG" (Number of Visits 13)

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

Owners DEUTSCH-ANSTRAL-DAMPFSCHIFFS G.E.S. Port belonging to HAMBURG

Electric Light Installation fitted by GEH. INAG 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 110 volts, Power 220 volts.

Direct or Alternating Current, Lighting Direct Power Direct

If alternating current system, state frequency of periods per second 50

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

Position of Generators Engine room 26 ft. - emergency ret. 26 ft. 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 ft. - emergency ret. 26 ft. in 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 yes

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 yes

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

yes, 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

live 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

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Voltmeter with Ohm

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

REBOV... ELECTRIC... 2020

The German Standards have been applied.

Cables: Single, twin, concentric, *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 *armoured cables covered where they are exposed to mechanical damage they are carried in iron channel for*

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 system.*

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 storerooms and engine rooms and where 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 *yes*

where are the controlling switches situated *yes*

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 *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 axes of rotation fore and aft *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 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 *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.		Insulated with	HOW PROTECTED.
		Kilowatts.	Volts.	Amperes.		Fuel Used.	Flash Point of Fuel.		
MAIN ...	2	100	230	435	230-250	oil	170° F		
AUXILIARY ...	1	10	115	87	230-250	oil	170° F		
EMERGENCY ...	1	10	115	87	230-250	oil	170° F		
ROTARY TRANSFORMER ...	2	20	115	174	1500	oil	170° F		

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor Sq. mm.	COMPOSITION OF STRAND.		Total Maximum Current Amperes.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	242	156	37	2.5	435	242-238		
	EQUALISER CONNECTIONS...								
	AUXILIARY GENERATOR...								
	EMERGENCY GENERATOR...	1	50	10	1.85	87	2x6		
	ROTARY TRANSFORMER...	2	70	19	2.15	115	2x7-18		
	AUXILIARY SWITCHBOARDS...								
	ENGINE ROOM...	4	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	33		
	SEARCHLIGHT...	1	16	7	1.7	20	129		
	MASTHEAD LIGHT...	2	15	1	1.8	2	236-100		
	SIDE LIGHTS...	2	15	1	1.8	2	230		
	COMPASS LIGHTS...	2	15	1	1.8	2	230		
	POOP LIGHTS...	2	15	1	1.8	2	230		
	CARGO LIGHTS...	1	15	1	1.8	25	26		
	AREO LAMPS...								
	HEATERS...								

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor Sq. mm.	COMPOSITION OF STRAND.		Total Maximum Current Amperes.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP...	1	20	6	2.25	27	2x20		
	MAIN BILGE LINE PUMPS...	2	16	7	1.7	28	2x17-28		
	GENERAL SERVICE PUMP...								
	EMERGENCY BILGE PUMP...								
	SANITARY PUMP...	1	20	7	2.1	29	7		
	CIRC. SEA WATER PUMPS...	1	240	61	2.25	272	2x25		
	CIRC. FRESH WATER PUMPS...								
	AIR COMPRESSOR...								
	FRESH WATER PUMP...	1	4	1	2.25	17	2x15		
	ENGINE TURNING GEAR...	2	6	1	2.75	26	2x5-8-26		
	ENGINE REVERSING GEAR...	2	35	19	1.55	72	2x10	rubber	lead covered and armoured.
	LUBRICATING OIL PUMPS...	1	35	10	1.55	67	2x10		
	OIL FUEL TRANSFER PUMP...	1	185	37	2.5	300	2x129		
	WINDLASS...	1	50	19	1.85	130	2x15-37		
	WINCHES, FORWARD...	6	50	19	1.85	130	2x15-35		
	WINCHES, AFT...								
	STEERING GEAR...								
	(a) MOTOR GENERATOR...	2	130	37	2.05	172	2x7-16		
	(b) MAIN MOTOR...	1	95	10	2.5	120	2x19		
	WORKSHOP MOTOR...	1	25	1	1.8	18	2x9		
	VENTILATING FANS...	1	35	1	1.8	85	2x12		
	Exhaust Pump...	1	4	1	2.25	16.5	2x16		
	Exhaust Compressor...	1	16	7	1.7	49	2x18		
	Exhaust Pump...	1	16	7	1.7	30	2x15		
	Oil fuel separator...	1	25	1	1.8	84	2x12		
	Water pump...	1	25	1	1.8	84	2x12		

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.

„Schiff-Installation“
Zweigniederlassung Hamburg
V. Rachen

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 Ampères... feet from standard compass... 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... degrees on... course in the case of the standard compass, and... 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... If so, state name of vessel "DUEBURG"

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

Installations are of good quality. As the conductor used are of the German Standards the British Ruler repeating 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 Ruler and is eligible in my opinion for record of 'ELECT. LIGHT.'

It is submitted that
this vessel is eligible for
THE RECORD Elec. light.

Total Capacity of Generators 310 Kilowatts.

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

Surveyor to Lloyd's Register of Shipping.

Im. 128.—Transfer.

Committee's Minute

FRI. 12 MAR 1926

Assigned

Elec Light



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Lloyd's Register
Foundation