

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office... 15 JUN 1925

Date of writing Report 30th MAY 1925 When handed in at Local Office 10 Port of HAMBURG.

No. in Survey held at HIEL Date, First Survey 25th FEBR. Last Survey 3rd MAY 1925
Reg. Book. (Number of Visits... 12...)

on the Steel Twin Sc Motor Tank "PERSEPHONE" Tons { Gross 8956
Net 5041.

Built at HIEL By whom built FRIED. KRUPP. GERM. WERK. and No. 470 When built 1915

Owners BALT.-AMERIK. PETROLEUM. IMP. G.m.b.H. Port belonging to DANZIG

Electric Light Installation fitted by FRIED. KRUPP.-GERMANIA WERK. A.G. Contract No. — When fitted 1925.

System of Distribution 2 wire. 2 conductor insulated, with separate conductors, except small cables (Sockets E. 20.5.25)

Pressure of supply, for Lighting 110 volts, Heating 220 volts, Power 220 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 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.

Are the lubricating arrangements of the generators as per Rule yes

Position of Generators Engine room. Emergency oil steam driven in evaporator room, shelter deck aft.

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, with the exception of steam driven emergency dynamo.

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 forward - elevated platform, + emergency in evaporator 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, 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 micanite 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 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 double-pole circuit breaker with overload and reversed current trips, interlocked by equalizer switch.

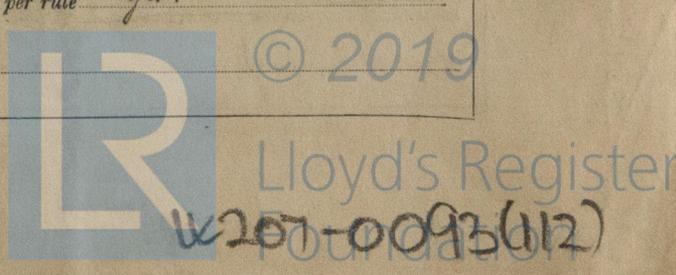
For each outgoing circuit: A fuse on each pole and a single pole switch on one pole.

Instruments on main switchboard 4 ammeters 1 voltmeters 3 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 Ohm meter and lamp - alarm - arrangement

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.



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 ^{generally}.

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *3% for power - 3% for lights.*

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 *armoured cables clipped and in troughs*

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 *water & air 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 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 *yes*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *yes*

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 *1 hot bulb motor driven dynamo in engine room main deck, 1 steam driven dynamo in evaporator room in main deck.*

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 *yes*, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *yes, gas light fittings, lamps protected by glass panels, how are the cables led, gas light fitting*

where are the controlling switches situated *double-pole switches on deck outside the spaces.*

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

Are Lamps, other than searchlight lamps, No. of *yes*, 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, of hot of cooling water circ. pumps*, are they protected from mechanical injury and damage from water, steam or oil *yes*, are their axis of rotation fore and aft *yes with the exception*, 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* and *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 *Steel main.*

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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	100	230	430	275	2 cyl. 45 C.S.F. Diesel engines.	Diesel Gas oil	170° F.
AUXILIARY	1	60	230	260	360	3 cyl. 45 C.S.F.		
EMERGENCY	1	17	220	75	500	2 cyl. Steam engine.		
ROTARY TRANSFORMER	1	15	110			Hot bulb motor		

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. In.	COMPOSITION OF STRAND.		Total Maximum Current. Amps.	Approximate Length. (Lead and Return.) Feet. Etc.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	4	95	19	2.5	430	160		equalizing line of 20 sq. in. flat area.
	AUXILIARY GENERATOR	4	95	19	2.5	260	160		
	EMERGENCY GENERATOR	2	33	19	1.55	45	25		
	ROTARY TRANSFORMER	2	70	19	2.5	65	135		
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	8	4	1	2.25	40	30 ft 90		
	BOILER ROOM								
	Updeck.	6	4	1	2.25	30	36		
	Middeck.	8	4	1	2.25	50	48		
	Foredeck.	6	4	1	2.25	38	120		
	Control for Navig. Lamp.	2	4	1	2.25		140		
	Typ. phon.	2	1.5	1	1.4	2	160		rubber lead covered & armoured.
	WIRELESS	2	6	1	2.75	12	135		
	SEARCHLIGHT	2	10	7	1.35	55	240		
	MASTHEAD LIGHT	2	2.5	1	1.8	0.5	F. 100 - 4/1140		
	SIDE LIGHTS	2	2.5	1	1.8	0.5	26		
	COMPASS LIGHTS	2	1.5	1	1.4	0.5	46		
	POOP LIGHTS	2	1.5	1	1.4	0.5	206		
	CARGO LIGHTS	2	2.5	1	1.8	3	90		
	ARC LAMPS								
	HEATERS etc.	2	95	19	2.5	150	65 to 240.		

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. In.	COMPOSITION OF STRAND.		Total Maximum Current. Amps.	Approximate Length. (Lead and Return.) Feet. Etc.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP	1	25	7	2.1	64	26		rubber lead covered and armoured.
	MAIN BILGE LINE PUMPS	2	25	7	2.1	53	32		
	GENERAL SERVICE PUMP								
	Sanitary Bilge Pump	1	6	1	2.75	20	25		
	SANITARY PUMP	1	25	7	2.1	72	32		
	CIRC. SEA WATER PUMPS	1	50	19	1.85	102	15		
	CIRC. FRESH WATER PUMPS								
	Refrigerator COMPRESSOR	2	16	7	1.7	20	50		
	FRESH WATER PUMP	1	1.5	1	1.4	6	40		
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	1	16	7	1.7	40	64		
	OIL FUEL TRANSFER PUMP	2	2.5	1	1.8	10	70		
	WINDLASS	1	340	61	2.5	324	350		
	WINCHES, Foremast	1	16	7	1.7	50	140		
	WINCHES, Mast	2	35	19	1.55	117	390		
	STEERING GEAR	2	50	19	1.85	94	130		
	WORKSHOP MOTOR	1	4	1	2.25	20	30		
	VENTILATING FANS	1	2.5	1	1.8	10	30		
	For. Hoist	2	4	1	2.25	18	74		
	Monkey Gears	1	1.5	1	1.4	6	15		
	Heavy fuel oil separator.	2	2.5	1	1.8	8.5	40		
	Refrig. sea water Circul. Pump.	1	2.5	1	1.8	6.5	3		
	Grain pump	2	2.5	1	1.8	13.5	6		
	Trimming machine	1	2.5	1	1.8	6.5	140		
	Capstan	3	70	19	2.15	117	500		
	Rotary transformer	1	35	19	1.55	130	25		
	2 fuel oil transfer	2	2.5	1	1.8	8.5	80		
	Cyre Compar.	1	4	1	2.25	18	100		

Lead covered to set electric fittings

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.

The Guilders are the

Electrical Engineers.

Date 30/5/25.

COMPASSES.

Distance between electric generators ~~anchors~~ and standard compass

about 75 m.

double pole system.

Distance between electric generators ~~or motors~~ and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying 0.5 Ampères close to ~~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 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.

FRIED. KRUPP
GERMANIAWERFT
Aktiengesellschaft

[Handwritten Signature]

Builder's Signature.

Date 30/5/25.

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 of fair

electric installation are of good quality. As the conductors used are of the "German Standard" the Society's Rules respecting conductors have been applied generally. The installation is fitted in accordance with the approved plans, the Secretary's letters and otherwise in conformity with the requirements of the Rules. The electric installation being built and fitted Special Survey is eligible in my opinion for record "ELECTR. LIGHT."

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

[Handwritten Signature]
9/7/25.

Total Capacity of Generators 286 Kilowatts

The amount of Fee ... £ 38 : 13 : -

When applied for, 5th June 1925

Travelling Expenses (if any) £ - : -

When received, 13th July 1925

[Handwritten Signature]
Friedrich Witt
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

1m, 9.52. - Registrar. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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