

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office..... 27 AUG 1932

Date of writing Report 22nd Aug 1932 When handed in at Local Office

Port of BREMEN

No. in Survey held at VEGESACK

Date, First Survey 14th April Last Survey 16th Aug. 1932

(Number of Visits 16)

Reg. Book.

64073 on the STEEL TWIN SC.

F. J. WOLFE

Tons { Gross 12432
Net 7100

Built at VEGESACK

By whom built BREMER VULKAN

Yard No. 698

When built 1932

Owners BALTISCH-AMERIK-PETROL-IMPORT-G.M.B.H. Port belonging to DANZIG

Electric Light Installation fitted by SIEMENS-SCHUCKERTWERKE A.G.

Contract No.

When fitted 1932

Is the Vessel fitted for carrying Petroleum in bulk YES ✓

System of Distribution Two wire direct current

Pressure of supply for Lighting 110 volts, Heating

110 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 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 no, 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 in Engine Room 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 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 in Engine Room on elevated 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 —

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 micanite 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

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 linked switch and a fuse on each pole. For each outgoing circuit a double pole change over switch and a fuse on each pole

Instruments on main switchboard 3 ammeters 2 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 1 Ohmmeter

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

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

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *at 4 Vels*

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 insulated 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 *yes*

Support and Protection of Cables, state how the cables are supported and protected *partly led in strong steel cable leads and partly protected by sheet iron plating*

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 *yes*

Joints in Cables, state if any, and how made, insulated, and protected *in watertight strong 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 *hard wood*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *none*

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 *none*

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, in steering house*

has each navigation lamp an automatic indicator as per Rule *yes*

Secondary Batteries, are they constructed and fitted as per Rule *none*

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 *yes, lower bridge deck*

gas tight lamps *yes*, how are the cables led *gas tight*

where are the controlling switches situated *in upper bridge deck*

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

Arc Lamps, other than searchlight lamps, No. of *none*, 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 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 and fitted as per Rule *yes*

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule *none, steel marks*

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 ...	2	20	115	174	375	Steam Engine	—	—
AUXILIARY ...								
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.)	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR ...	1	120	61	1.59	174	174	30	Rubber	Lead covered and armoured
EQUALISER CONNECTIONS ...									
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER MOTOR GENERATOR ...	1	4	19	0.52	15	20	24	—	—
GYRO COMPASS ENGINE ROOM ...	1	8x 1.5	1	1.78	4	7.8	30	—	—
BOILER ROOM ...	1	120	61	1.59	174	174	36	—	—
AUXILIARY SWITCHBOARDS ...	1	70	37	1.55	127	127	234	—	—
SHORE CONNECTION	1	70	37	1.55	127	127	234	—	—
STATION I LIGHT	1	4	19	0.52	5	20	120	—	—
— II —	1	4	19	0.52	5	20	120	—	—
— III & IV —	1	10	19	0.82	35	37	30	—	—
ACCOMMODATION ...									
STATION I POWER	1	120	61	1.59	160	174	36	—	—
— II —	1	50	19	1.83	95	95	80	—	—
GALLEY	1	70	37	1.55	115	127	28	—	—
TODD OIL BURNER INST.	1	70	37	1.55	120	127	97	—	—
WIRELESS ...	1	10	19	0.82	35	37	20	—	—
SEARCHLIGHT ...	1	4	19	0.52	18	20	36	—	—
MASTHEAD LIGHT ...	1	2.5	1	1.78	2	12.9	160	—	—
SIDE LIGHTS ...	1	1.5	1	1.38	2	7.8	40	—	—
COMPASS LIGHTS ...	1	1.5	1	1.38	2	7.8	20	—	—
POOP LIGHTS ...	1	2.5	1	1.78	2	12.9	180	—	—
CARGO LIGHTS ...	1	2.5	1	1.78	5	12.9	120	—	—
ARC LAMPS ...									
HEATERS ... STOVE	1	50	19	1.83	100	100	30	—	—

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.)	Insulated with	HOW PROTECTED.
		No. per Pole.	Total Effective Area per Pole.	No.	Diameter.	In Circuit.	Rule.			
REFR. MACH.	1	1	16	19	1.04	40	46	28	RUBBER	Lead covered and armoured
EXHAUST PUMP	1	1	4	19	0.52	16	20	88	—	—
OIL SEPARATOR	1	1	4	19	0.52	16	20	88	—	—
MAIN BILGE PUMP	1	1	2.5	19	1.38	8	64	16	—	—
SMALL LATHE	1	1	2.5	19	1.38	8	64	16	—	—
CHAMBER CAUTION PUMP	1	1	2.5	19	1.38	8	64	16	—	—
BIG LATHE	1	1	2.5	19	1.38	8	64	16	—	—
EMERGENCY BILGE PUMP	1	1	2.5	19	1.38	8	64	16	—	—
DRILLING MACHINE	1	1	6	19	0.64	24	30	16	—	—
SHAPING MACHINE	1	1	6	19	0.64	24	30	15	—	—
CIRC. SAW PUMPS	1	1	2.5	1	1.78	16	16	12	—	—
BRINDING MACHINE	1	1	2.5	1	1.78	16	16	12	—	—
CIRC. PUMP WATER PUMPS	1	1	2.5	1	1.78	16	16	12	—	—
AIR COMPRESSOR	1	1	2.5	1	1.78	16	16	36	—	—
DRINKING	1	1	2.5	1	1.78	16	16	36	—	—
FRESH WATER PUMP	2	1	2.5	19	1.38	84	64	49	—	—
ENGINE TURNING GEAR	2	1	2.5	19	1.38	84	64	49	—	—
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR										
ELECTRIC TELE MOTOR	1	1	4	19	0.52	20	20	10	—	—
(a) MOTOR GENERATOR	2	1	2.5	1	1.78	16	16	8	—	—
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS	2	1	10	19	0.82	36	37	30	—	—
BOILERS	2	1	2.5	1	1.78	8.5	12.9	6	—	—
MAIN PUMPS	2	1	1.5	1	1.38	2.5	7.8	5.5	—	—
AUX. —	2	1	1.5	1	1.38	2.5	7.8	5.5	—	—
TRANSFORMER	1	1	2.5	1	1.78	18	12.9	6	—	—

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.

Firmen-Schiffbau Werke V. Lindner Electrical Engineers.

Date *16. III. 32*

COMPASSES.

Distance between electric generators or motors and standard compass *8 m*

Distance between electric generators or motors and steering compass *6 m*

The nearest cables to the compasses are as follows:—

A cable carrying *0.5* Ampères *12* feet from standard compass *6* feet from steering compass.

A cable carrying *20* Ampères *6* feet from standard compass *10* feet from steering compass.

A cable carrying *0.5* Ampères *close to* feet from standard compass *close to* 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 *nil* degrees on *all* course in the case of the standard compass, and *nil* degrees on *all* course in the case of the steering compass.

Ernst Vulkan
Schiffbau und Maschinenfabrik
Kraiser

Builder's Signature. Date *19. 8. 32*

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. *This electric installation has*)

been fitted in accordance with the approved plans and the requirements of the Rules. It has been tested under working condition and found to be in order. The materials used in the construction and the workmanship are of good quality. Regarding conductor the German Standards have been applied generally. This installation is eligible in my opinion for notation of: "ELECTRIC LIGHT"

Elec Light
SA 21/8/32

Total Capacity of Generators *40* Kilowatts.

The amount of Fee ... £ *25: 0: 0* :
When applied for, *19*
Travelling Expenses (if any) £ : :
When received, *1.9.19.32*

A. Carstensen
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec. Lt.



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Foundation