

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

26 AUG 1936

Received at London Office

Date of writing Report 19 When handed in at Local Office 24.8. 1936 Port of GDYNIA

No. in Survey held at Tanzig Date, First Survey 25th June Last Survey 30th July, 1936
Reg. Book. 21750. on the Steel S.S. "Paul Harned" (Number of Visits 2)

Built at Tanzig By whom built F. Schichau G. m. b. H. Yard No. 1350 When built 1936
Owners Deutsch-Amerikanische Petroleum Ges. Port belonging to Hamburg
Tons { Gross 10443
Net 5815

Electric Light Installation fitted by F. Schichau G. m. b. H. Contract No. 1936 When fitted 1936

Is the Vessel fitted for carrying Petroleum in bulk yes

System of Distribution Two wire system

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 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 Engine room lower platform
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 lower 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 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
accessibility of all parts yes, absence of fuses on back of board yes, proportion of omnibus bars 40 x 5 mm

individual fuses to voltmeter, pilot or earth lamp yes, connections of switches yes

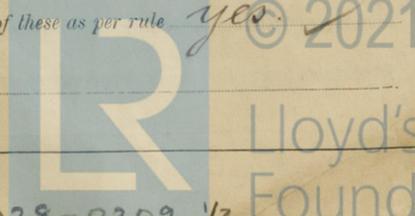
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For each generator a double pole overload circuit breaker, for each outgoing circuit a fuse on each pole and a double pole change over switch

Instruments on main switchboard 4 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 One of the voltmeters is provided with Ohm scale

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 *yes*.

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

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 *Steel armoured cables supported by cable carriers; protected by iron casings where exposed to mechanical damage.*

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 *no*. 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 *none*.

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 *Chatterton*.

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

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

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

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

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, all gas tight fittings*, how are the cables led *only outside*.

where are the controlling switches situated *outside and in wheel house*.

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, are their live parts insulated from the frame or case, are their fittings as per Rule

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, 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 and fitted as per Rule *yes*.

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule

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

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	each 25	115	304	375	2 steam engines		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION	CONDUCTORS		COMPOSITION OF STRAND		TOTAL MAXIMUM CURRENT AMPERES		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED
	No. per Pole	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rate.			
MAIN GENERATOR	1	.5	61	.103	304	332	48	Rubber	Lead covered, braided and armoured.
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR	1	.003	3	.030	5	12	120	Rubber	"
ENGINE ROOM	1	.003	3	.030	5	12	180	"	"
BOILER ROOM	1	.003	3	.030	5	12	180	"	"
AUXILIARY SWITCHBOARDS									
Thore connection	1	.25	37	.093	200	214	130	"	"
Galley	1	.15	37	.072	124	152	150	"	"
Work shop	1	.10	19	.083	102	118	140	"	"
ACCOMMODATION									
Bridge	1	.20	37	.083	16	184	680	"	"
Top & upper deck	1	.10	19	.083	96	118	240	"	"
Fore castle	1	.0045	7	.039	5	18	600	"	"
WIRELESS	1	.06	19	.064	48	83	100	"	"
SEARCHLIGHT	1	.0045	7	.029	5	18	110	"	"
MASTHEAD LIGHT	1	.003	3	.036	1	12	500	"	"
SIDE LIGHTS	1	.003	3	.036	1	12	100	"	"
COMPASS LIGHTS	1	.003	3	.036	1	12	50	"	"
POOP LIGHTS	1	.003	3	.036	1	12	560	"	"
CARGO LIGHTS	1	.003	3	.036	3	12	180	"	"
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION	No. of Motors	CONDUCTORS		COMPOSITION OF STRAND		TOTAL MAXIMUM CURRENT AMPERES		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED
		No. Per Pole	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rate.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS	1	1	.0045	7	.029	2	16	250	Rubber	Lead covered, braided and armoured.
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR	1	1	.060	19	.064	80	83	60	"	"
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS	1	1	.0045	7	.029	6	16	60	"	"
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD	2	1	.04	19	.052	32	64	85	"	"
WINCHES, AFT										
Relig. engine	1	1	.04	19	.052	40	64	300	"	"
STEERING GEAR	1	1	.15	37	.072	164	191	300	"	"
(a) MOTOR GENERATOR	2	1	.15	37	.072	120	144	100	"	"
(b) MAIN MOTOR	2	1	.15	37	.072	120	144	100	"	"
WORKSHOP MOTOR	1	1	.04	19	.052	60	64	100	"	"
VENTILATING FANS										
Grinding stone	1	1	.007	7	.036	16	24	80	"	"
Chipping machine	1	1	.04	19	.052	40	64	70	"	"
Drilling	1	1	.007	7	.036	16	24	90	"	"
Oil separator	1	1	.007	7	.036	10	24	80	"	"

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.

F. Schichau G. m. b. H. Elbing
Abt. Schiffswerft zu Danzig

Mann *Ricker*

Electrical Engineers.

Date 21st August 1936

COMPASSES.

Distance between electric generators or motors and standard compass 20 feet

Distance between electric generators or motors and steering compass 20 "

The nearest cables to the compasses are as follows:—

A cable carrying .5 Amperes 4 feet from standard compass 4 feet from steering compass.

A cable carrying .5 Amperes 4 feet from standard compass 4 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.

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.

F. Schichau G. m. b. H. Elbing
Abt. Schiffswerft zu Danzig

Mann *Ricker*

Builder's Signature.

Date 21st August 1936

Is this installation a duplicate of a previous case? If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c.) This installation is fitted in accordance with the approved plans and the requirements of the Society's Rules for electrical equipment, materials and workmanship are of good quality. The installation has been tried in all parts under full working conditions with satisfactory results.

Noted
Yam
2.9.36

Total Capacity of Generators 70 Kilowatts.

The amount of Fee RM 590.00

Travelling Expenses (if any) £

When applied for by Hamburg Office 19
When received, 20.10.36

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

Committee's Minute FRI. 4 SEP 1936

Assigned See Gdy JE 1545

1m, 9, 30.—Transfer. (The Surveyors are requested not to write on or obliterate the space for Committee's Minutes.)

