

Rpt. 13.

No. 933.

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 9 FEB 1929

Received at London Office.....

Date of writing Report 7th Feb. 1929 When handed in at Local Office

10 Port of STETTIN

No. in Survey held at STETTIN

Date, First Survey 2nd Aug. 1928 Last Survey 7th February 1929.

Reg. Book.

(Number of Visits 18.....)

63926 on the Steel S.S. "AMSTELKERK"

Tons { Gross 4338  
Net 2314

Built at STETTIN

By whom built Mische &amp; Co. A.G. Yard No. 286

When built 1929.

Owners Vereenigde Nederlandsche  
Schepvaart Maatschappij

Port belonging to The Hague

Electric Light Installation fitted by Schiffs-Installation A.G.

Contract No.

When fitted 1929.

System of Distribution Two wire conductors

Pressure of supply for Lighting 110 volts, Heating - volts, Power 110 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 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 s.s. side, working 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 s.s. side, middle grating.

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 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

reversing regulator, a fuse on each pole and a double pole linked switch. For each outgoing

circuit a fuse on each pole and a double pole linked switch or a single pole change over switch.

Instruments on main switchboard 2 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 2 earth lamps.

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.



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*The German Standards*

**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 *570.*

**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 *Armoured cables supported by cable carriers, secured by clips, where exposed to risk of mechanical damage protected by sheet iron or pipes.*  
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 *Watertight 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 ~~un~~armoured 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. —  
—, 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, in the chart room.*  
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 staterooms and engine rooms and where exposed to drip or condensal moisture, watertight *yes.*  
are any fittings placed in spaces in which gases are liable to be started 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 —.  
—, how are the cables led —.  
where are the controlling switches situated —.

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

**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, local 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.		Insulated with	HOW PROTECTED.
		Kilowatts.	Volts.	Amperes.		Fuel Used.	Flash Point of Fuel.		
MAIN ...	2	each 22	115	190	500	Steam engine of 160 x 260 mm cyl. dia.			
AUXILIARY ...	—					160 mm stroke.			
EMERGENCY ...	1	6.4.	115	56	1000	2 cy. fuel oil motor on boat deck	fitted 9.38	See report 22412.	
ROTARY TRANSFORMER	1								
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. mm.				
	MAIN GENERATOR...	4	150	37	2.27	190	72	Rubber.	Lead covered, braided and Armoured.
	EQUALISER CONNECTIONS	—							
	AUXILIARY GENERATOR	—							
	EMERGENCY GENERATOR	—							
	ROTARY TRANSFORMER...	2	10	7	1.35	30	180	"	"
	AUXILIARY SWITCHBOARDS	—							
	ENGINE ROOM ...	2	2.5	1	1.78	10	65	"	"
	BOILER ROOM ...	4	2.5	1	1.38	5	65	"	"
	Accommodation Eng. Room	6	1.5	1	1.38	5	80	"	"
	Fireship	2	2.5	1	1.78	4.5	320	"	"
	Armchairs	2	2.5	1	1.78	9	160	"	"
	Bridge	2	2.5	1	1.78	5	240	"	"
	Saloons	2	10	7	1.35	29	120	"	"
	"	2	6	1	2.78	22	100	"	"
	Decks	2	16	7	1.71	40	100	"	"
	Propeller	2	6	1	2.78	9	320	"	"
	Funnel	2	1.5	1	1.38	2	160	"	"
	WIRELESS ...	2	10	7	1.35	30	180	"	"
	SEARCHLIGHT ...	—							
	MASTHEAD LIGHT...	4	1.5	1	1.38	1	360	"	"
	SIDE LIGHTS...	4	1.5	1	1.38	1	120	"	"
	COMPASS LIGHTS...	2	1.5	1	1.38	0.5	100	"	"
	POOP LIGHTS ...	2	1.5	1	1.38	1	360	"	"
	CARGO LIGHTS ...	2	2.5	1	1.78	2	300	"	"
	ARC 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. mm.				
	BALLAST PUMP ...								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP ...								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR ...								
	FRESH WATER PUMP ...								
	ENGINE TURNING GEAR	1	95	19	2.52	60	92	Rubber	Lead covered, braided and Armoured.
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS ...								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR—								
	(a) MOTOR GENERATOR...								
	(b) MAIN MOTOR ...								
	WORKSHOP MOTOR	1	10	7	1.35	30	75	"	"
	VENTILATING FANS								
	Battery	1	2.5	1	1.78	8	80	"	"
	Oil separator	1	6	1	2.78	20	36	"	"

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.

Schiffs-Installation-Aktiengesellschaft  
Ingenieur-Büro Stettin

Electrical Engineers.

Date

#### COMPASSES.

Distance between electric generators ~~or motors~~ and standard compass *Abt 100 ft.*

Distance between electric generators ~~or motors~~ and steering compass *95*

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 *0.5* Amperes *6* feet from standard compass *8* 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.

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

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

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 this Installation are of good quality. As the conductors used are of the German Standard, the Society's Rules regarding conductors have been applied generally. The Installation is otherwise fitted in accordance with the approved plan and in conformity with the requirements of the Society's Rules and has tested under full load with satisfactory results. It is eligible in my opinion for the record of "Electric Lights"*

*It is submitted that  
this vessel is eligible for  
the record.*

*Elie Light*

*13/2/29.*

Total Capacity of Generators *44* Kilowatts.

The amount of Fee ... £ *26 : 0* : *3/22/29.*

Travelling Expenses (if any) £ : : *2/2/29.*

*M. Polle.*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

*Elie Light*



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