

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

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No. in Survey held at Krumpen 'a' Yssel Date, First Survey 8. 11. 27 Last Survey 18 - 1 1928  
Reg. Book. Rotterdam (Number of Visits... 12)

on the m. s. "Dordrecht" Tons { Gross  
Net

Built at Krumpen 'a' Yssel By whom built C. v. d. Giessen & Co. Yard No. When built 1927

Owners Phs. v. Ommeren Port belonging to Rotterdam

Electric Light Installation fitted by A. V. Elect. Bar. A. de Haas Contract No. When fitted 1927

System of Distribution Two-wire

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 in Motorroom

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 near dynamo's

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, mica

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

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

generators & outgoing circuits double-pole change-over switches and d.p. fuses.

Instruments on main switchboard 2 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

2 earth lamps sets

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 wire* 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 *5 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 *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 *supported by metal clips and protected by tubes or armouring*

If cables are run in wood casings, are the casings and caps secured by screws *—*, are the cap screws of brass *—*, are the cables run in separate grooves *—*. 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 *No joints*

**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 *—*, 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 *gas tight fittings with guards*, 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 *in Chartroom*

**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 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 *yes*

**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 *—*

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	40	115	610	400	Steam engines			
AUXILIARY	1	15	115	130	430	diesel			
EMERGENCY									
ROTARY TRANSFORMER									

  

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	1.0376	127	.103	610	50	paper	armoured
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR	2	.07892	19	.072	130	50	—	—
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS	2	.06000	19	.064	70	30	rubber	—
	ENGINE ROOM	2	.0462	7	.052	135	30	—	—
	BOILER ROOM								
	ACCOMMODATION	2	.0462	7	.052	26	390	—	—
	WIRELESS	2	.0462	7	.052		450	—	—
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	.00322	1	.064	1	300	—	—
	SIDE LIGHTS	2	.00322	1	.064	1	72	—	—
	COMPASS LIGHTS	2	.00322	1	.064	1	160	—	—
	POOP LIGHTS	2	.00322	1	.064	1	540	—	—
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

  

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS	1	.02214	7	.064	30	150	rubber	armoured
	GENERAL SERVICE PUMP	1	.0462	7	.052	40	150	paper	—
	EMERGENCY BILGE PUMP	1	.06000	19	.064	120	00	—	—
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS	2	.06000	19	.064	120	00	—	—
	CIRC. FRESH WATER PUMPS	2	.0396	19	.052	60	00	—	—
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR	1	.06000	19	.064	70	00	—	—
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	2	.0396	19	.052	70	60	—	—
	OIL FUEL TRANSFER PUMP	1	.02214	7	.064	24	60	—	—
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR								
	WORKSHOP MOTOR	1	.0462	7	.052	24	00	—	—
	VENTILATING FANS	2	.01046	7	.044	16	200	—	—
	Oil burner fans	3	.0396	19	.052	70	200	—	—
	Refrigerator	1	.0396	19	.052	40	400	—	—
	Purifiers	3	.01046	7	.044	16	200	—	—

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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.

N.V. ELECTROTECHNISCH BUREAU  
A. DE WILCOX

Electrical Engineers. Date 4 Febr. '28

COMPASSES.

Distance between electric generators or motors and standard compass 160 feet  
Distance between electric generators or motors and steering compass 104 "  
The nearest cables to the compasses are as follows:—  
A cable carrying 2 Ampères 22 feet from standard compass 0 feet from steering compass.  
A cable carrying 4 Ampères 4 feet from standard compass 4 feet from steering compass.  
A cable carrying 1 Ampères 1 feet from standard compass 1 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 0 degrees on every course in the case of the standard compass, and 0 degrees on every course in the case of the steering compass.

C. van der Giessen & Zonen's  
Scheepswerf.  
C. van der Giessen

Builder's Signature. Date

Is this installation a duplicate of a previous case yes If so, state name of vessel m.s. Duinendrecht

General Remarks (State quality of workmanship, opinions as to class, &c. This installation has been fitted in accordance with the requirements of the Society's Rules, workmanship good and was found in a good working condition when tried. I am of opinion that this installation merits the approval of the Committee

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

J.W.D.  
17/2/28  
J.L.

Total Capacity of Generators 152 Kilowatts.

The amount of Fee ... £ 411.00  
Travelling Expenses (if any) £ 4  
When applied for, 6/2 19.2.28  
When received, 22/2/28

J.L. Oetoo  
Surgeon to Lloyd's Register of Shipping.

Committee's Minute TUES. 21 FEB 1928

Assigned ELEC LIGHT

Im. 127.—Transfer. (The Surveys are requested not to write on or below the space for Committee's Minute.)