

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 10 Oct 1928

Date of writing Report 3 Oct. 1928 When handed in at Local Office 10 Port of Rotterdam.

No. in Survey held at Rotterdam Date, First Survey 26 June Last Survey 2 October 1928
Reg. Book. (Number of Visits 27)

on the S. S. Kruisvliet Tons { Gross 6219.43 Net 3712.56

Built at Rotterdam By whom built P. Smit Jr. Yard No. 418 When built 1928.

Owners Verenigde Ned. Scheep. W. Port belonging to Amsterdam.

Electric Light Installation fitted by N. V. Elect. Techn. Bure. A. de Vries Contract No. When fitted 1928.

System of Distribution two wire

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

Direct or Alternating Current, Lighting Direct Power —

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,

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.

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, 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

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

Generators and outgoing circuits double pole change over switches and d. p. fuses.

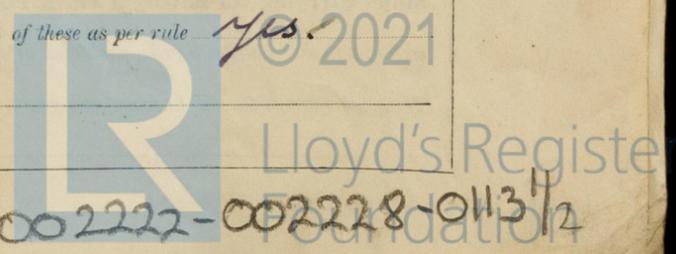
Instruments on main switchboard 2 ammeters 2 voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

2 earth lamp 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.



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Cables: Single, twin, concentric, or multicore *single and twin* 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 *support by metal clips*

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 *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

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 *1*, whether fixed or portable *1*, are their fittings as per Rule

Arc Lamps, other than searchlight lamps, No. of *1*, are their live parts insulated from the frame or case *1*, 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 *1*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *1* 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

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	05	770	700	525	Steam engines		
AUXILIARY	1							
EMERGENCY	1							
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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	0.4350	91	103	800	36	rubber	armoured.
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS	2							
	ENGINE ROOM	2	0.01462	7	1052.	35	30	rubber	armoured.
	BOILER ROOM								
	ACCOMMODATION	2	0.03960	19	1052.	40	180		
	Day lighting and Cabin ventilators	2	0.06000	19	1052.	60	180		
	WIRELESS	2	0.02214	7	1052.		180		
	SEARCHLIGHT	1							
	MASTHEAD LIGHT	2	0.00322	7	1052.		390		
	SIDE LIGHTS	2	0.00322	7	1052.		90		
	COMPASS LIGHTS	2	0.00322	7	1052.		60		
	POOP LIGHTS	2	0.00322	7	1052.		540		
	CARGO LIGHTS	2	0.00701	7	1052.		390		
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS	2	0.30240	34	103.	110	78	rubber	armoured.
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP	2	0.06000	19	1052.	80	150	rubber	armoured.
	CIRC. SEA WATER PUMPS	2	0.44000	61	103.	310	150		
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR	2	0.06000	19	1052.	80	150		
	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	2	0.00701	7	1052.	16	30		
	VENTILATING FANS								
	Boiler fan motor	2	0.02400	27	103.	30	120		
	Cargo fan motor	2	0.06000	19	1052.	80	150		
	Blowdown	2	0.00701	7	1052.	16	90		
	Motor Laundry	2	0.03960	19	1052.	40	480		

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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 HOOP

Electrical Engineers.

Date 14 Sept 1928

COMPASSES.

Distance between electric generators or motors and standard compass

75 ft.

Distance between electric generators or motors and steering compass

69 ft.

The nearest cables to the compasses are as follows:—

A cable carrying 0.5 Ampères 2 feet from standard compass 3 feet from steering compass.

A cable carrying 0.5 Ampères 6 feet from standard compass 5 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. 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 — degrees on — course in the case of the standard

compass, and — degrees on — course in the case of the steering compass.

MACHINEFABRIEK & SCHEEPSWERF
van F. SMIT Jr.

Builder's Signature.

Date 4 October 1928

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 installation has been)

fitted in accordance with the Society's rules
was found in good working condition when tried
and merits in my opinion the Committee's approval.

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

J. 19/10/28

Total Capacity of Generators 170 Kilowatts.

The amount of Fee ... £ 420.00

When applied for, 5/10/28

Travelling Expenses (if any) £ :

When received, 10-1-29

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 23 OCT 1928

Assigned

Elec Light

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



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