

Rpt. 13.

No. 19015

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 27 NOV 1930

Date of writing Report 3/10 1930 When handed in at Local Office 19 Port of Rotterdam

No. in Survey held at Rotterdam Date, First Survey 10.5.30 Last Survey 16.10.1930
Reg. Book. (Number of Visits 13)

on the M. P. Kona Agoeng

Tons { Gross 4351
Net 4601

Built at Rotterdam By whom built Etablissement Fynord Yard No. 507 When built 1930

Owners Rotterdamsche Bloed. Port belonging to Rotterdam

Electric Light Installation fitted by T. F. F. Schoten & Houwers. Contract No. When fitted 1930.

Is the Vessel fitted for carrying Petroleum in bulk Rotterdam.

System of Distribution Two wire system.

Pressure of supply for Lighting 230 volts, Heating 230 volts, Power 230 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 Yes, 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

Position of Generators in motor room in Port & St. B. under the switch board.

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 motor 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 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 quick linked knife switch for equalizer and neg. pole, and automatic min. max. single pole quick linked knife switch for the positive pole.

Instruments on main switchboard 8 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 two 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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02

Cables: Single, twin, concentric, or multicore *single and 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 *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 *in cabins rubber insulated conductors in double groove casing. In all other places lead covered and armoured secured by metal clips on deck in 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 *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 or hard wood*

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 *yes*

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

Arc Lamps, other than searchlight lamps, No. of *one*, 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

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

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	200	240	910	250	Diesel engine	Diesel Oil	above 100° F
AUXILIARY	1	50	240	227	250	"	"	"
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.	Rule.			
MAIN GENERATOR	4	185	37	2.53	910	1932	150 to 250	rubber	lead covered and armoured
EQUALISER CONNECTIONS	2	185	37	2.53		466	150 to 250	"	"
AUXILIARY GENERATOR	1	185	37	2.53	227	233	150	"	"
EMERGENCY GENERATOR								"	"
ROTARY TRANSFORMER MOTOR GENERATOR								"	"
ENGINE ROOM	1	6	7	1.05	20	29.25	200	"	"
BOILER ROOM								"	"
AUXILIARY SWITCHBOARDS								"	"
Aft ship	1	16	7	1.71	36	48	400	"	"
amidship aft	1	16	7	1.71	44	48	180	"	"
" fore	1	35	19	1.53	70	76.4	250	"	"
navigation	1	4	7	0.86	3	21.8	300	"	"
fore ship	1	10	7	1.35	14	38	360	"	"
ACCOMMODATION								"	"
Heater amidship fore	1	70	19	2.17	123	123	360	"	"
" " aft	1	70	19	2.17	125	123	300	"	"
" fore ship	1	10	7	1.35	32	38	7	"	"
WIRELESS	1	6	7	1.05	10	29.25	280	"	"
SEARCHLIGHT	1	25	7	2.13	50	60.61	150	"	"
MASTHEAD LIGHT	1	15	1	1.39	15	9	400	"	"
SIDE LIGHTS	1	15	1	1.39	15	9	375	"	"
COMPASS LIGHTS	1	15	1	1.39	15	9	30	"	"
POOP LIGHTS	1	15	1	1.39	15	9	600	"	"
CARGO LIGHTS	1	2.08	1	1.63	2/3	12	120	"	"
ARC LAMPS	1	2.08	1	1.63	10	12	30	"	"
HEATERS	1	2.08	1	1.63	12	12	60	"	"

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.	Rule.			
BALLAST PUMP	1	2	95	19	2.53	300	380	180	"	"
MAIN BILGE LINE PUMPS	1	1	10	7	1.35	32	38	30	"	"
GENERAL SERVICE PUMP	1								"	"
EMERGENCY BILGE PUMP	1								"	"
SANITARY PUMP	1	1	16	7	1.71	52	48	240	"	"
CIRC. SEA WATER PUMPS	1	2	95	19	2.53	270	300	140	"	"
CIRC. FRESH WATER PUMPS	2	2	70	19	2.17	280	246	100	"	"
AIR COMPRESSOR	1	2	540	61	2.24	560	550	160	"	"
FRESH WATER PUMP	2	1	2.08	1	1.63	6	12	25	"	"
ENGINE TURNING GEAR	3	1	6	7	1.05	24	29.25	100	"	"
ENGINE REVERSING GEAR	1	1							"	"
LUBRICATING OIL PUMPS	2	1	50	19	1.83	95	99.3	200	"	"
OIL FUEL TRANSFER PUMP	2	1	6	7	1.05	28	29.25	75	"	"
WINDLASS	1	2	70	19	2.17	240	246	120	"	"
WINGES, FORWARD	5	1	70	19	2.17	125	123	60	"	"
" amidship	4	1	50	19	1.83	100	99.3	140	"	"
WINGES, AFT	6	1	70	19	2.17	125	123	60	"	"
Lubricating oil separator	2	1	4	7	0.86	14	21.8	100	"	"
Washing water pump	1	1	1.5	7	1.39	6	9	40	"	"
Scrubbing oil pump	1	1	150	37	2.34	208	203.7	280	"	"
(a) MOTOR GENERATOR									"	"
(b) MAIN MOTOR	1	1	35	19	1.53	80	76.4	360	"	"
WORKSHOP MOTOR	1	1	4	7	0.86	12	21.8	50	"	"
VENTILATING FANS	2	1	1.5	7	1.39	3	9	150	"	"
Lubricating oil pumps	2	1	35	19	1.53	70	76.4	80	"	"
Cooling water pumps	1	1	16	7	1.71	52	48	240	"	"
Washing water pump	1	1	50	19	1.83	100	99.3	140	"	"
deck cranes	2	1	95	19	2.53	128	150	108	"	"
Fuel oil separator	2	1	1.5	7	1.39	8	9	60	"	"
" heater	1	1	70	19	2.17	108	123	75	"	"
Lubricating " "	1	1	35	19	1.53	84	76.4	180	"	"
Refrigerator	1	1	25	7	2.13	56	60.61	60	"	"

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. Van Rietschoten & Houwens'
 Electrotechnische Maatschappij

Electrical Engineers.

Date 3/10/30

COMPASSES.

Distance between electric generators or motors and standard compass 90 feet

Distance between electric generators or motors and steering compass 90 feet

The nearest cables to the compasses are as follows:—

A cable carrying 60 Ampères 50 feet from standard compass 45 feet from steering compass.

A cable carrying 10 Ampères 30 feet from standard compass 36 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 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.

Maatschappij voor Scheeps- en Werktuigbouw
 WILHEMNOORD, N.V.

[Handwritten Signature]

Builder's Signature.

Date 23 October, 1930

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, material and workmanship good, The vessel was found in a good working order when tested and I am of opinion that this vessel's electric light and power installation merits the approval of the Committee.

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

28/10/30

[Handwritten Signature]

Total Capacity of Generators 450 Kilowatts.

The amount of Fee ... £ 513.00 When applied for, 10 Nov 30

Travelling Expenses (if any) £ : : 14.11.30 When received, 14.11.30

[Handwritten Stamp]

[Handwritten Signature]
 Secretary to Lloyd's Register of Shipping.

Committee's Minute TUE. 4 NOV 1930

Assigned Elec. Light

Im. 11.29.—Transfer. (The Surveys are requested not to write on below the space for Committee's Minute.)



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