

Rpt. 13.

No. 12346

## REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

13 AUG 1931

Received at London Office

Date of writing Report 5 August 1931 When handed in at Local Office

Port of AMSTERDAM

No. in Survey held at AMSTERDAM

Date, First Survey 11 June

Last Survey 29 July

1931

Reg. Book.

(Number of Visits 2)

89517 on the Steel Twin Screw M.V. "A POLLONIA"

Tons { Gross -

Net -

Built at Rotterdam

By whom built N.V. Werf v. Rijkee &amp; Co. Yard No. 202

When built 1931

Owners Nederlandsch-Indische Tank Stoomboot My. Port belonging to 's-Gravenhage

Electric Light Installation fitted by N.V. v. Rietschoten &amp; Houwens

Contract No. - When fitted 1931

Is the Vessel fitted for carrying Petroleum in bulk

Yes

## System of Distribution

Double wire System

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

Direct or Alternating Current, Lighting Direct current, Power Direct current.

If alternating current system, state frequency of periods per second 1

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 1

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 Yes

## Position of Generators

In 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

In 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 1 and 1

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 1

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 break linked knife switch as a double pole

for propulsion and navigation pole for each outgoing pole circuit a double pole

linked knife switch as a double pole for

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 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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Lloyd's Register

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Cables: Single, twin, concentric, or multicore *single, twin* are the cables insulated and protected as per Tables IV or V of the Rules *ye*

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

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 *ye*

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 *ye*

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 *ye*

Support and Protection of Cables, state how the cables are supported and protected *in cable led down as in old lead covered and secured to iron pipe, 4 in diameter, by iron clamps, secured by iron clamps.*

If cables are run in wood casings, are the casings and caps secured by screws *ye*, are the cap screws of brass *ye*, are the cables run in separate grooves *ye*. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII *ye*

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements *ye*

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 *ye*

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed *ye* state the material of which the bushes are made *Lead and hard wood*

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

are their connections made as per Rule *ye*

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule *ye*

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven *ye*

Navigation Lamps, are these separately wired *ye*, controlled by separate switch and separate fuses *ye*, are the fuses double pole *ye*, are the switches and fuses grouped in a position accessible only to the officers on watch *ye*, has each navigation lamp an automatic indicator as per Rule *ye*

Secondary Batteries, are they constructed and fitted as per Rule *ye*

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight *ye*, 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 *ye*, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *watertight bulkheads*, how are the cables led *outside old house*, where are the controlling switches situated *outside of pump room*

Searchlight Lamps, No. of *1*, whether fixed or portable *1*, are their fittings as per Rule *ye*

Are Lamps, other than searchlight lamps, No. of *1*, are their live parts insulated from the frame or case *ye*, are their fittings as per Rule *ye*

Motors, are their working parts readily accessible *ye*, are the coils self-contained and readily removable for replacement *ye*, are the brushes, brush holders, terminals and lubricating arrangements as per Rule *ye*, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material *ye*, are they protected from mechanical injury and damage from water, steam or oil *ye*, are their axes of rotation fore and aft *ye*, 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 *ye*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *ye* and *ye*

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule *ye*

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

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 *ye*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *ye*

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN ...	1	12	110	110	390	on 6th floor			
AUXILIARY ...						on 1st floor			about 150°
EMERGENCY ...									
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		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 ...	1	40	19	2.14	110	120	45	rubber	lead covered
EQUALISER CONNECTIONS ...									as above
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER MOTOR GENERATOR ...									
ENGINE ROOM ...	1	10	4	1.35	22	38	45	"	"
BOILER ROOM ...									
AUXILIARY SWITCHBOARDS ...									
ACCOMMODATION ...	1	10	4	1.35	32	38	140	"	"
for as many ...	1	10	4	1.35	14	38	400	"	"
WIRELESS ...	1	10	4	1.35	15	38	200	"	"
SEARCHLIGHT ...	1	1 1/2	1	1.39	25	9	240	"	"
MASTHEAD LIGHT ...	1	1 1/2	1	1.39	0.6	9	100	"	"
SIDE LIGHTS ...	1	1 1/2	1	1.39	0.6	9	60	"	"
COMPASS LIGHTS ...	1	1 1/2	1	1.39	0.4	9	400	"	"
POOP LIGHTS ...	1	1 1/2	1	1.39	0.4	9	60	"	"
CARGO LIGHTS ...	1	1 1/2	1	1.39	0.4	9		"	"
ARC LAMPS ...									
HEATERS ...									

MOTOR CONDUCTORS.									
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.		
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 ...	2	1	16	4	1.41	44	50	40	rubber lead covered, and
ENGINE TURNING GEAR ...									
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 ...									
VENTILATING FANS ...									
Generator machine	1	1	4	4	0.86	20	21	20	rubber lead covered, and
both	1	1	4	4	0.86	22	21	20	do
three	1	1	4	4	0.86	18	21	20	do



*The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.*

**N. V. Van Rietschoot & Houyens**  
Electrotechnisch Bureau

Date \_\_\_\_\_

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass

*The nearest cables to the compasses are as follows :—*

A cable carrying 14 Amperes 25 feet from standard compass. 15 feet from steering compass.

A cable carrying 11 Amperes 25 feet from standard compass 18 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 4 degrees on 4 course in the case of the standard compass, and 4 degrees on 4 course in the case of the steering compass.

*Builder's Signature.*

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.)

The installation has been tested under full working conditions, the whole made in accordance with the Rules, workmanship good.

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

Ecce. Left  
 1578/37

Total Capacity of Generators ..... 24. Kilowatts.

		When applied for,	
The amount of Fee ... ..	£ 234.-	:	19.....
		When received,	
Travelling Expenses (if any) £	:	:	31/8/31.....

*P. W. Bennett*  
Surveyor to Lloyd's Register of Shipping.

TUE. 18 AUG 1931

Committee's Minute

*Assigned*

*Elec Light*