

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

29 OCT 1929

Date of writing Report 25-10-1929 When handed in at Local Office 19 Port of Rotterdam

No. in Survey held at Schiedam Date, First Survey 14-8-29 Last Survey 22-10-1929
Reg. Book. (Number of Visits 1 1/2)

on the steel twin screw vessel DELFTDIJK Tons { Gross 10220.26
Net 6304.60

Built at Schiedam By whom built Messrs Milton Yard No. 318 When built 1929

Owners Holland-American Line Port belonging to

Electric Light Installation fitted by Messrs. Groenewald & Pol Contract No. ✓ When fitted 1929

Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution for power: two wire for light: single wire with Hull return
Pressure of supply for Lighting 110 volts, Heating 220 volts, Power 220 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 yes

Position of Generators for power: two port and two starboard - axes in fore and aft direction
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 —

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 on first platform aft 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 — 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 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

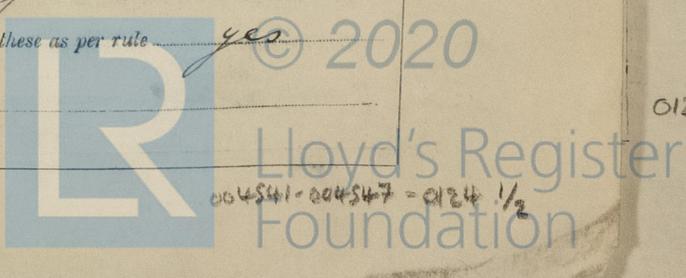
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches for each generator a triple-pole automatic circuit-breaker. The knife of the equaliser touches the contact earlier than of the both other poles

Instruments on main switchboard 4 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 lamps in series, the middle point connected with the earth

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 *all types* 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 *3% for lighting - 5% for power*

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

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 *on perforated or solid steel galvanised*

steel plates with galvanised iron clips with brass screws

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 *—*. 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 *—*

Joints in Cables, state if any, and how made, insulated, and protected *in brass cast boxes.*

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

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 *vulcan fibre and lead.*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *for the lighting generators*

For each dynamo two cast brass blocks of 6" x 2" x 2" thick

are their connections made as per Rule *yes*

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 *yes*

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 *—*, 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 *—*

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	4	150	220	670	280	Diesel engines		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER	2	25	220	230	1500	Electric motors		

for power only for lighting

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION	No. per Pole.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.				
MAIN GENERATOR	3	0.9072	37	0.103	670	720	120		rubber	lead. steel wire
EQUALISER CONNECTIONS	2	0.6648	37	0.103	335	480	120		"	"
AUXILIARY GENERATOR										
EMERGENCY GENERATOR										
ROTARY TRANSFORMER	1	0.14780	37	0.072	130	152	30-72		"	"
ENGINE ROOM I	1	0.30240	37	0.103	230	240	30-72		"	"
BOILER ROOM I	1	0.02214	7	0.064	35	46	180		"	"
AUXILIARY SWITCHBOARDS	1	0.02214	7	0.064	40	46	125		"	"
L ₁ -L ₃ -L ₄ -L ₅ -L ₆	1	0.07592	19	0.072	75	97	120-160		"	"
L ₇ -L ₈ -L ₉	1	0.01046	7	0.044	20	31	60		"	"
L ₁₁ -L ₁₂ -L ₁₃	1	0.01046	7	0.044	20	31	60		"	"
L ₁₄	1	0.03960	19	0.052	35	64	120-80		"	"
navigation	1	0.01462	7	0.052	15	37	120		"	"
ACCOMMODATION L ₁₅	1	0.01046	7	0.044	6	31	180		"	"
V ₁ -V ₅ -V ₄	1	0.02214	7	0.064	20	46	240		"	"
V ₃ -V ₆ -V ₇	1	0.24650	37	0.093	150	214	140		"	"
V ₂ -V ₈	1	0.14780	37	0.072	100	152	100		"	"
V ₉	1	0.14780	37	0.072	80	152	110		"	"
WIRELESS	1	0.06000	19	0.064	55	83	240		"	"
SEARCHLIGHT	1	0.01462	7	0.052	20	37	180		"	"
MASTHEAD LIGHT	1	0.00455	7	0.029	0.5	18.2	240-340		"	"
SIDE LIGHTS	1	0.00455	7	0.029	0.5	18.2	60		"	"
COMPASS LIGHTS	1	0.00455	7	0.029	0.5	18.2	40		"	"
POOP LIGHTS	1	0.00455	7	0.029	0.5	18.2	480		"	"
CARGO LIGHTS	1	0.00455	7	0.029	10	18.2	120		"	"
ARC LAMPS										
HEATERS	1	0.00455	7	0.029	10	18.2	90		"	"

light heaters

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	1	0.07592	19	0.072	94	97	42	rubber	lead. steel wire
MAIN BILGE LINE PUMPS	1	1	0.03960	19	0.052	52	64	40	"	"
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS	1	1	0.00455	7	0.029	38	18.2	60	"	"
CIRC. FRESH WATER PUMPS	1	1	0.01046	7	0.044	22	31	30	"	"
AIR COMPRESSOR	4	1	0.49850	61	0.103	320	332	90	"	"
FRESH WATER PUMP	2	1	0.14780	37	0.072	140	152	210	"	"
ENGINE TURNING GEAR	2	1	0.02214	7	0.064	40	46	72-50	"	"
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS	3	1	0.24650	37	0.093	172	214	65	"	"
OIL FUEL TRANSFER PUMP	1	1	0.03701	7	0.036	19	24	60	"	"
WINDLASS	1	1	0.46640	61	0.093	375	452 (30 min)	150	"	"
WINCHES, FORWARD	8	1	0.11680	37	0.064	160	160 (30 min)	55-90	"	"
" " " " " " " "	2	1	0.11680	37	0.064	160	160 (30 min)	60	"	"
WINCHES, AFT	10	1	0.11680	37	0.064	160	160 (30 min)	55-90	"	"
STEERING GEAR										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR	1	1	0.14780	37	0.072	160	191 (30 min)	230	"	"
WORKSHOP MOTOR	1	1	0.00455	7	0.029	8	18.2	120	"	"
8 VENTILATING FANS	8	1	"	"	"	12	"	120	"	"
1 " " " " " " " "	1	1	0.003960	19	0.052	60	64	80	"	"
" " " " " " " "	1	1	0.00455	7	0.029	4	"	60	"	"
4 brine pumps	4	1	0.01046	7	0.044	24	31	40	"	"
1 " " " " " " " "	1	1	0.00455	7	0.029	8	18.2	40	"	"
2 " " " " " " " "	2	1	"	"	"	6	18.2	50	"	"
4 oil separator	3	1	"	"	"	12	18.2	45	"	"
1 line oil pump	1	1	0.03960	19	0.052	52	64	60	"	"

CO2

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. Groeneveld, Van der Poll & Co's

Electrical Engineers.

Date 25-10-29.

COMPASSES.

Distance between electric generators or motors and standard compass 200 feet from wireless motor generator

Distance between electric generators or motors and steering compass " " " " " "

The nearest cables to the compasses are as follows:—

A cable carrying 0,25 Ampères 3 feet from standard compass and 4 feet from steering compass.

A cable carrying 10 Ampères 25 feet from standard compass 15 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 nihil degrees on every course in the case of the standard compass, and nihil degrees on every course in the case of the steering compass.

N.V. WILTON'S Machinefabriek en Scheepswerf (Wilton's Engineering and Slipway Co.)

Builder's Signature.

Date 25-10-29

Handwritten signature of J. Wilton

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

It is submitted that

this vessel is suitable for THE REGISTRY

See. Light

Handwritten initials

Handwritten date 2/10/29

Total Capacity of Generators 600 Kilowatts.

The amount of Fee ... £ 558.00 When applied for, 20/10/29 Travelling Expenses (if any) £ : When received, 16.11.29

Handwritten signature of C.H. Bourse, Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 5 NOV 1929

Assigned The Light

Im.1228—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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