

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

NOV 14 1938

Received at London Office

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19

Port of ROTTERDAM

No. in Survey held at ROTTERDAM

Date, First Survey 7th - 10 - 38 Last Survey 19th - 10 - 1938

Reg. Book.

(Number of Visits.....2.....)

72526 on the m.s. "CLAUSINA"

Tons { Gross 7987
Net 4764

Built at ROTTERDAM

By whom built Rotterdamsche Droogdok M.Y. Yard No. 203 When built 1938

Owners Ned. Ind. Tankboot M.Y.

Port belonging to

the Hague.

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

Contract No.

When fitted 1938

Is the Vessel fitted for carrying Petroleum in bulk Yes

System of Distribution Two conductor insulated system ✓

Pressure of supply for Lighting 110 volts, Heating ✓ volts, Power 110 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 temperature rise 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 ✓ Have certificates of test results for machines under 100 kw. been submitted and

approved yes ✓ Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓

Have certificates for generators under 100 kw. been supplied and approved 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 engineroom, starboardside ✓, 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 engineroom, starboardside ✓

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 ✓

is it of an approved type marble ✓, 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 ✓, is the non-hygroscopic insulating material of an approved

type 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 ✓, temperature rise of

omnibus bars yes ✓, individual fuses to voltmeter, pilot or earth lamp yes ✓, are moving parts of switches alive in the

"off" position no ✓ are all screws and nuts securing connections effectively locked yes ✓ are any fuses fitted on the live side of

switches no ✓ Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches for steam-driven generator and for each outgoing circuit: one double pole change over switch and one set of double pole fuses; for oil driven generator: one double pole switch and one set of double pole fuses.

Are turbine driven generators fitted with emergency trip switch as per rule ✓ Are cupboards or compartments containing switchboards composed of

fire-resisting material or lined with approved material yes ✓ Instruments on main switchboard 2 ✓ ammeters 2 ✓

voltmeters ✓ synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

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

one pair of earth fault indicating lamps for each generator ✓ Switches, Circuit Breakers and Fusible Cut-outs,

do these comply with the requirements of the Rules. yes ✓ are the fusible cutouts of an approved type yes ✓ have the reversed

current protection devices been tested under working conditions yes are all fuses labelled as per rule yes

Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule yes

Cables: Single, ~~twinn~~, ~~concentric~~, or multicore all types are the cables insulated and protected as per Tables IV, V, X, XI, XII or XIII of the Rules yes

If the cables are insulated otherwise than as per Rule, are they of an approved type yes Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 4.2 Volts Cable Sockets, are the ends of all cables having a sectional

area of 0.04 square inch and above provided with soldering sockets yes Paper Insulated and Varnished Cambric Insulated Cables,

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound yes, or waterproof insulating tape 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 are cables laid under machines or floorplates yes if so, are they adequately protected yes

Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit yes all cables are clipped to metal trays or direct to steelwork

Support and Protection of Cables, state how the cables are supported and protected or woodwork of vessel, or run in conduit

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, 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 Lead covering & steel wire braiding of cables and all apparatus earthed where necessary 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 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 yes (telephone)

are they ventilated as per Rule yes

Fittings, are all fittings on weather decks, in stakeholds 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 the w.t. fittings in

centre-castle space have stout prismatic glass lenses; these lights are entirely switched off at sea.

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected pumprooms are lighted

by w.t. fittings in special gastight boxes in the pumproom entrances. how are the cables led

wiring in conduit wholly outside pumprooms

where are the controlling switches situated in Chart room

are all fittings suitably ventilated yes are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials yes

Heating and Cooking Appliances, are they constructed and fitted as per Rule yes are air heaters constructed and fitted as per Rule yes

Searchlight Lamps, No. of 1 whether fixed or portable portable 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 where possible

if not of this type, state distance of the combustible material horizontally or vertically above the motors yes and yes

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing yes have certificates for all motors for

essential services been supplied and approved yes 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 are all fuses of the fitted cartridge type yes are they of an approved type yes

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed flameproof type approved for use in dangerous spaces yes

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule yes are they suitably stored in dry situations yes

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	1	16	110	145	390	Steam engine	<u>✓</u>	<u>✓</u>
AUXILIARY	1	16	110	145	390	Oil engine	diesel oil	above 150°F
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 Nominal Area per Pole Sq. Ins. <small>37, 19, 7.</small>	No.	Diameter. <small>1/32, 1/16.</small>	Circuit.	Rule.			
MAIN GENERATOR	1	.150	37	.072	145	152 ✓	36	rubber	Lead sheath - steel wire braiding
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR ...	1	.150	37	.072	145	152 ✓	60	"	"
Shore connection	1	.150	37	.072	-	152 ✓		"	"
Emergency Generator									
ROTARY TRANSFORMER { MOTOR GENERATOR ...									
ENGINE ROOM... ..	1	.0145	7	.052	36	37 ✓	60	"	"
BOILER ROOM... ..									
AUXILIARY SWITCHBOARDS									
Workshop distr. board	1	.0600	19	.064	70	83 ✓	200	"	"
Navigation board	1	.0145	7	.052	10	37 ✓	540	"	"
Portable connections D.B.	1	.0145	7	.052	20	37 ✓	160	"	"
ACCOMMODATION									
Fore ship D.B.	1	.0225	7	.064	12	46 ✓	1000	"	"
Midship D.B.	1	.0400	19	.052	51	64 ✓	540	"	"
Aft accomm. D.B.	1	.0225	7	.064	37	46 ✓	120	"	"
WIRELESS	1	.0225	7	.064	42	46 ✓	600	"	"
SEARCHLIGHT	1	.0600	19	.064		83 ✓	1000	"	"
MASTHEAD LIGHT	1	.0023	1	.055	.4	9.5 ✓	500	"	"
SIDE LIGHTS	1	.0023	1	.055	.4	9.5 ✓	120	"	"
COMPASS LIGHTS	1	.0023	1	.055	.5	9.5 ✓	70	"	"
POOP LIGHTS	1	.0023	1	.055	.4	9.5 ✓	750	"	"
CARGO LIGHTS	1	.0023	1	.055	2	9.5 ✓	600	"	"
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal 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										
ENGINE TURNING GEAR	1	1	.12	19	.087	61	125	100	rubber	Lead sheath - steel wire braiding
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP	1	1	.0070	7	.036	17	24	120	"	"
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS	1	1	.0070	7	.036	12.5	24	100	"	"
Grinding stone	1	1	.0100	7	.044	24.5	31	25	"	"
Drilling machine	1	1	.0100	7	.044	17.7	31	25	"	"
Lathe	1	1	.0030	7	.033	13.8	22.5	25	"	"
Oil purifier	1	1	.0070	7	.036	17.7	24	75	"	"
Clear view screen	1	1	.0026	1	.055	.5	9.5	45	"	"

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The Electrical Equipment is installed in accordance with the approved plans.

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

The foregoing is a correct description.

Van Rietschoten & Houwer
Nagelschke

Electrical Engineers.

Date 31 Oct 1938

COMPASSES.

Minimum distance between electric generators or motors and standard compass 8 feet (clear view screen)

Minimum distance between electric generators or motors and steering compass 6 feet (clear view screen)

The nearest cables to the compasses are as follows:—

A cable carrying 15 Ampères 1 feet from standard compass 1 feet from steering compass.

A cable carrying 4 Ampères 6 feet from standard compass 6 feet from steering compass.

A cable carrying 20 Ampères 20 feet from standard compass 15 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.

P. P. DE ROTTERDAMSCHER DROOGDOEK M.J.

[Signature]

[Signature]

Builder's Signature.

Date 3 Nov. 1938.

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

General Remarks (State quality of workmanship, opinions as to class, etc. The electrical equipment of this

vessel has been fitted on board under special survey, tested under full working conditions and found satisfactory. The material and workmanship are good and the electrical installation merits in my opinion the Committee's approval.

[Signature]
15/11/38

Total Capacity of Generators 32 Kilowatts.

The amount of Fee ... £ 275.00. : When applied for, 12.11.38

Travelling Expenses (if any) £ 1.00 : When received, 2/12/38

[Signature]

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

[Signature]

FRI 18 NOV 1938



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