

10, 15,
23, 25,

Rpt. 13.

No. 25678

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

JUN 14 1937

Received at London Office

Date of writing Report 1-6-1937 When handed in at Local Office 10 Port of Rotterdam
 No. in Survey held at Schiedam Date, First Survey 5-3-37 Last Survey 25-5-1937
 Reg. Book. "NEDERLAND" (Number of Visits 9)
 on the motor vessel Tons { Gross
 Net
 Built at Schiedam By whom built Hilton-Tyennon Yard No. 660 When built 1937
 Owners Nederlandsche Pacific Tankers Mij. Port belonging to 's Gravenhage
 Electric Light Installation fitted by M. R. H. Electriciteits Mij. 's Gravenhage Contract No. 1 When fitted 1937
 Is the Vessel fitted for carrying Petroleum in bulk Yes

System of Distribution two conductor insulated system

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

Direct or Alternating Current, Lighting direct Power direct

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 _____

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 _____

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

Have certificates for generators under 100 kw. been supplied and approved _____

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 _____

is all insulation of high dielectric strength and of permanently high insulation resistance yes

is it of an approved type 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

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 each generator has a double pole overload circuit breaker, each circuit a double pole switch and fuses

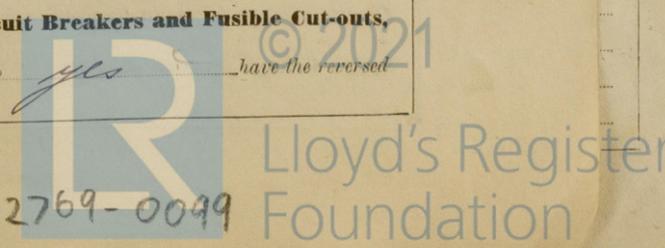
Are turbine driven generators fitted with emergency trip switch as per rule _____ Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material _____

Instruments on main switchboard two ammeters two 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 earth lamps

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 _____



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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, twin, concentric, or multicore single 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 5 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, lead covered

Support and Protection of Cables, state how the cables are supported and protected engine room cable runs, decks galvanized angles

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 only in final lighting sub-circuits, made in metal boxes with screwed connections

Watertight Glazings 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 by means of screwed copper clips, 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

are they ventilated 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 yes, protected with glass and metal guards, everything gastight

how are the cables led in galvanized iron tubes, gastight connected

where are the controlling switches situated in officers quarters midship

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 one whether fixed or portable fixed, 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 yes

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

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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	12105	110	915	Diesel engine	Sea oil	above 150°	
AUXILIARY								
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.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	4	1,2000	37	0.103	915	960	120	rubber	lead & armoured
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM STARBOARD	1	0,3000	37	0.103	225	240	150		
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ENGINE ROOM PORT	1	0,2500	37	0.093	222	214	40		
Refrigerators	1	0,0750	19	0.072	94	97	90		
Workshop	1	0,0750	19	0.072	92	97	70		
Lighting SB	1	0,0145	7	0.052	25	37	150		
PORT	1	0,0145	7	0.052	26	37	40		
ACCOMMODATION									
Lighting Aft SB	1	0,0145	7	0.052	30	37	130		
PORT	1	0,0145	7	0.052	28	37	90		
amid	1	0,1200	137	0.064	78	130	425		
for	1	0,0145	7	0.052	8	31	430		
navigation	1	0,0070	7	0.036	7	24	500		
WIRELESS	1	0,0225	7	0.064	46	46	460		
SEARCHLIGHT	1	0,0100	7	0.044	18	31	110		
MASTHEAD LIGHT	1	0,0030	1	0.064	0.4	12.9	420		
SIDE LIGHTS	1	0,0030	1	0.064	0.4	12.9	30		
COMPASS LIGHTS	1	0,0030	1	0.064	0.2	12.9	50		
POOP LIGHTS									
CARGO LIGHTS	1	0,0145	7	0.052	10	37	450		
HEATERS	1	0,0225	7	0.064	46.5	46	120		

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 Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS	1	2	0,3000	37	0.072	298	304	150	rubber	lead & armoured
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP	1	1	0,2400	19	0.052	60	64	130		
SANITARY PUMP	1	1	0,2400	19	0.052	60	64	135		
CIRC. SEA WATER PUMPS	2	2	0,4000	37	0.083	320	368	75		
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP	1	1	0,0145	7	0.052	36	37	60		
ENGINE TURNING GEAR	1	1	0,0750	19	0.072	102	115	175		
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS	2	1	0,0600	19	0.064	72	83	50		
OIL FUEL TRANSFER PUMP	1	1	0,0225	7	0.064	40	46	50		
WINDLASS										
WINCHES, FORWARD										
Lathe	1	1	0,0145	7	0.052	32	37	60		
WINCHES, AFT										
Lathe	1	1	0,0145	7	0.029	8	10.2	60		
STEERING GEAR—										
(a) MOTOR GENERATOR	2	1	0,2500	37	0.093	262	295	150		
(b) MAIN MOTOR	2	1	0,2500	37	0.093	233	295	125		
WORKSHOP MOTOR	1	1	0,0100	7	0.044	12	31	60		
VENTILATING FANS	acc	1	0,0045	7	0.029	5	10.2	130		
fan boiler	1	1	0,0600	19	0.064	81	83	90		
galley	2	1	0,0030	1	0.064	6	12.9	150		
oil pump	3	1	0,0030	1	0.064	6	12.9	50		
oil separator	1	1	0,0070	7	0.036	20	24	20		
piston cooling pump	1	1	0,0600	19	0.064	70	83	120		
refrigerator	1	1	0,0225	7	0.064	46	47	40		
drill	1	1	0,0045	7	0.029	12	10.2	60		
grinding	1	1	0,0070	7	0.036	16	24	60		



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.

p.p. N.V. Rotterdamsche Electriciteits Mij.
H. H. CROON & CO.

Electrical Engineers.

Date 31-5-1937

COMPASSES.

Minimum distance between electric generators or motors and standard compass 300 feet.

Minimum distance between electric generators or motors and steering compass 200 feet.

The nearest cables to the compasses are as follows:—

A cable carrying 0.2 Ampères 2.1 feet from standard compass 2 feet from steering compass.

A cable carrying — Ampères — feet from standard compass — 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.

WILTON-FIJENOORD.

(N.V. WILTON's Machinefabriek en Scheepswerf
(WILTON's Engineering & Slipway Co.)
Maatschappij voor Scheeps- en Werktuigbouw

Builder's Signature.

Date

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 approved plan, Society's Rules and Secretary's letters. Material tested as required and workmanship good. The whole has been examined under full working condition and found in order and merits in my opinion the approval of the Committee.

Wid
L.Y.
15/6/37

Total Capacity of Generators 210 Kilowatts.

The amount of Fee ... \$ 506.00

When applied for, 10.6.1937

Travelling Expenses (if any) £ + : 30-6-37

When received, 19.6.37

J.H. Bourne
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 18 JUN 1937

Assigned See J.E. Mcby Rpt

The Surveyors are requested not to write on or below the space for Committee's Minute.

