

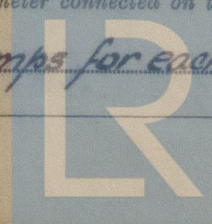
Rpt. 13.

No. 22323<sup>C</sup>

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office... JUL 21 1939

Date of writing Report 10<sup>th</sup> July, 1939 When handed in at Local Office... 19... Port of RotterdamNo. in Survey held at Krimpen a/d IJssel Date, First Survey 31.5.39 Last Survey 5<sup>th</sup> - 7 - 1939  
Reg. Book. (Number of Visits... 6...)on the ms. "OSCILLA" Tons { Gross 6341.02  
Net 3590.10Built at Krimpen a/d IJssel By whom built vd. Giessen & Z'n Scheepswerk and No. 657 When built 1939Owners N.V. Petroleum My 'La Corona' Port belonging to s. GravenhageElectrical Installation fitted by Rietschoten & Houwens' Electrotechn. My N.V. Contract No. ... When fitted 1939Is vessel fitted for carrying Petroleum in bulk yes Is vessel equipped with D.F. yes E.S.D. yes Gy.C. no Sub.Sig. noHave plans been submitted and approved yes System of Distribution two conductor insulated Voltage of supply for Lighting noHeating ✓ Power 110 Direct or Alternating Current, Lighting D.C. Power D.C. If Alternating Current state frequency ✓ Prime Movers,has the governing been tested and found efficient when the whole load is suddenly thrown on and off yes Are turbine emergency governors fitted with atrip switch as per Rule ✓ Generators, are they compound wound yes, are they level compounded under working conditions yes,if not compound wound state distance between generators ✓ and from switchboard ✓ Where more than one generator is fitted are theyarranged to run in parallel no, are shunt field regulators provided yes Is the compound winding connected to the negative or positive polepositive pole Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓ Have certificates oftest for machines under 100 kw. been supplied yes and the results found as per rule yes Are the lubricating arrangements and the constructionof the generators as per rule yes Position of Generators in engineroom starboard sideis the ventilation in way of generators satisfactory yes are they clear of inflammable material yes, if situatednear unprotected combustible material state distance from same horizontally ✓ and vertically ✓, are the generators protected from mechanicalinjury and damage from water, steam and oil yes, are the bedplates and frames earthed yes and the prime movers and generators in metalliccontact yes Switchboards, where are main switchboards placed in engineroom starboard sideare they in accessible positions, free from inflammable gases and acid fumes yes, are they protected from mechanical injury and damage from water, steamand oil yes, if situated near unprotected combustible material state distance from same horizontally ✓ and vertically ✓, what insulationmaterial is used for the panels marble with mica washers & bushings if of synthetic insulating material is it an Approved Type ✓, if ofsemi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule yes Is the frame effectually earthed yesIs the construction as per Rule yes, including accessibility of parts yes, absence of fuses on the back of the board yes Fuses of the motorgenerator for subdued lighting are mounted behind board, but ample space is provided individual fusesto pilot and earth lamps, voltmeters, etc. yes locking of screws and nuts yes, labelling of apparatus and fuses yes, fuses on the "dead"side of switches yes Description of Main Switchgear for each generator and arrangement of equaliser switches Steam driven generator andshore connection are controlled by a double pole change over switch & double pole fuses. —Auxiliary generator is controlled by a double pole switch & double pole fuses.and for each outgoing circuit a double pole change over switch & double pole fuses.Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 2ammeters 2 voltmeters ✓ synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to theequaliser connection ✓ Earth Testing, state means provided two earth fault indicating lamps for each generator.



Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an approved type yes, are all fuses labelled as per Rule yes, are the reversed current protection devices connected on the pole opposite to the equaliser connection ✓, have they been tested under working conditions ✓. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule yes. Cables, are they insulated and protected as per the appropriate Tables of the Rules yes, if otherwise than as per Rule are they of an approved type ✓, state maximum fall of pressure between bus bars and any point under maximum load 5 volts, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends ✓ with insulating compound ✓ or waterproof insulating tape ✓. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or 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, etc., lead covered yes or run in conduit ✓. State how the cables are supported and protected in machinery spaces and in accommodation, on bridge deck etc. the cables are clipped to metal trays or direct to steelwork and woodwork of vessel - cables between foreship, centre castle and aft and in forecastle and centre castle spaces are run in gastight conduit. Are all lead sheaths, armouring and conduits effectually bonded and earthed yes. Refrigerated chambers, are the cables and fittings as per Rule yes. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes, where unarmoured cables pass through beams, etc., are the holes effectively bushed yes and with what material lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes. Emergency Supply, state position ✓ and method of control ✓. Navigation Lamps, are they separately controlled by separate double pole switches yes and fuses yes. Are the switches and fuses in a position accessible only to the officers on watch yes, is an automatic indicator fitted yes. Secondary Batteries, are they constructed and fitted as per Rule yes, are they adequately ventilated yes. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof yes. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present yes, if so, how are they protected fittings in pump room entrances are totally enclosed in gastight metal boxes with stout glass lenses; in forecastle space and centre castle space approved Wigan gastight fittings are fitted throughout. and where are the controlling switches fitted the other fittings controlled in Mate's office, are all fittings suitably ventilated yes, are all fittings and accessories constructed and installed as per Rule yes. Searchlight Lamps, No. of one, whether fixed or portable portable (searchlight is not on board), are their fittings as per Rule ✓. Heating and Cooking, is the general construction as per Rule ✓, are the frames effectually earthed ✓, are heaters in the accommodation of the convection type ✓. Motors, are all motors constructed and installed as per Rule yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil yes, if situated near unprotected combustible material state minimum distance from same horizontally ✓ and vertically ✓. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing ✓. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule yes. Control Gear and Resistances, are they constructed and fitted as per Rule yes. Lightning Conductors, where required are they fitted as per Rule yes. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with yes, are all fuses of the 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 yes. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule yes, are they suitably stored in dry situations yes. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory yes.

# 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	20	110	182	400	steam engine	✓	✓
Auxiliary	1	20	110	182	400	diesel engine	diesel oil	above 150°F
EMERGENCY								
ROTARY TRANSFORMER	1	2.65 h.p.	110	22	3000			
	1	1.5 kw.	210-32	63.5-47	3000			

# GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return leads) MET.	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Cable.	Sectional Area of Conductor sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	20	1	150	182	205	20	rubber	Lead sheath & steel wire braiding.
" " EQUALISER ...								
Auxiliary Generator	20	1	150	182	205	20	"	"
Shore connection		1	160	200	205	60	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR	2.65 h.p.	1	6	22	29	25	"	"
" " GENERATOR	1.5 kw.	1	10	47.6	49	25	"	"

# MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS ...								
Workshop motors & ventilators dist. brd.	1	70	100	125	66	"	"	"
Portable connections dist. brd.	1	10	12	38	59	"	"	"

# LIGHTING AND HEATING, ETC., CABLES.

WIRELESS ...	1	16	37	49	140	"	"	"
NAVIGATION LIGHTS ...	1	10	10	38	150	"	"	"
LIGHTING AND HEATING								
Lighting dist. brd. midship	1	35	55	78	144	"	"	"
" " foreship (supply from midship)	1	6	2	29	104	"	"	"
" " crew's quarters	1	10	25	38	50	"	"	"
" " aft	1	6	10	29	60	"	"	"
" " engine room	1	16	38	49	50	"	"	"
Searchlight	1	35	-	78	312	"	"	"
Cargo lights	1	1.5	1.5	9.5	106	"	"	"
Headroom lights, side lights, poop light	1	1.5	4	9.5	120-200	"	"	"

# MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Engine turning gear	1	7.5	1	25	60	63	66	"
Oil fuel transfer pump	1	2	1	4	17	22.5	60	"
Oil separator	1	2	1	4	17.7	22.5	9	"
Engine room ventilator	1	2	1	10	16.2	38	50	"
Midship ventilator	1	3.3	1	10	26.7	38	142	"
Lathe	1	1.5	1	2.5	13.8	16.5	10	"
Grindingstone	1	3	1	6	24.5	29	10	"
Drill	1	2	1	6	17.7	29	14	"



The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

~~Van Rielachoten & Houtman~~  
~~Electrotechnische Bedrijfsmaatschappij, B.V.~~

Electrical Engineers.

Date

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass

9 ft. (clear view screen)

40 ft. (ventilator)

30 ft. (rotary converter in wireless station)

Minimum distance between electric generators or motors and steering compass

8 ft. (clear view screen)

30 ft. (ventilator)

28 ft. (rotary converter in wireless station)

The nearest cables to the compasses are as follows:—

A cable carrying 15 Ampères 1 feet from standard compass 1 feet from steering compass (compass lighting)

A cable carrying 1 Ampères 12 feet from standard compass 3 feet from steering compass (electr. telegraph)

A cable carrying 2 Ampères 4 feet from standard compass 4 feet from steering compass (wheelhouse lighting)

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 nil degrees on every course in the case of the

standard compass, and nil degrees on every course in the case of the steering compass.

MAANLOOZE VENNOOTSCHAP

C. VAN DER GIESSEN & ZONEN'S

SCHIEPZWERVEN

Builder's Signature.

Date 19 July 1939

Is this installation a duplicate of a previous case no

If so, state name of vessel

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, 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 installation merits in my opinion the Committee's approval.

Noted  
24/7/39

Total Capacity of Generators 40 Kilowatts.

The amount of Fee ... £ 300.00

When applied for,

10.7.39

Travelling Expenses (if any) £ 9.00

When received,

22.8.39

H. van der Wijk

Surveyor to Lloyd's Register of Shipping.

FRI 28 JUL 1939

Committee's Minute

Assigned

See Rot. J.E. 28393