

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report. 24th 5 - 1939. When handed in at Local Office. 19. Port of RotterdamNo. in Survey held at Schiedam Date, First Survey 25th 4 - 39 Last Survey 20th 5 - 1939
Reg. Book. (Number of Visits. 5)on the m.s. "CISTULA". Tons { Gross 8096.63
Net 4710.17

Built at Schiedam By whom built Messrs. Wilton - Feyenoord Yard No. 666 When built 1939

Owners Mr. Petroleum M. y. La Corone Port belonging to J. Gravenhage.

Electrical Installation fitted by Mr. Rotterdam Electr. M. y. H. Croon & Co. Contract No. When fitted 1939

Is vessel fitted for carrying Petroleum in bulk. yes Is vessel equipped with D.F. yes E.S.D. yes Gy.C. no Sub.Sig. no

Have plans been submitted and approved. yes System of Distribution two conductor insulated Voltage of supply for Lighting 110

Heating. ✓ 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 a

trip 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 they

arranged to run in parallel. no, are shunt field regulators provided. yes Is the compound winding connected to the negative or positive pole

positive pole Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing. ✓ Have certificates of

test for machines under 100 kw. been supplied. yes and the results found as per rule. yes Are the lubricating arrangements and the construction

of the generators as per rule. yes Position of Generators in engine room on starboard side of main

engine, is the ventilation in way of generators satisfactory. yes are they clear of inflammable material. yes, if situated

near unprotected combustible material state distance from same horizontally. ✓ and vertically. ✓, are the generators protected from mechanical

injury and damage from water, steam and oil. yes, are the bedplates and frames earthed. yes and the prime movers and generators in metallic

contact. yes Switchboards, where are main switchboards placed in engine room on starboard side of

main engine

are they in accessible positions, free from inflammable gases and acid fumes. yes, are they protected from mechanical injury and damage from water, steam

and oil. yes, if situated near unprotected combustible material state distance from same horizontally. ✓ and vertically. ✓, what insulation

material is used for the panels. marble, if of synthetic insulating material is it an Approved Type. ✓, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule. yes Is the frame effectually earthed. yes

Is the construction as per Rule. yes, including accessibility of parts. yes, absence of fuses on the back of the board. yes, individual fuses

to 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. main generator:

a double pole change over switch & double pole fuses — auxiliary generator:

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 2

ammeters 2 voltmeters ✓ synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection. ✓ Earth Testing, state means provided one pair of 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 5/16ths, 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 cables in machinery spaces and in accommodation and superstructure decks are clipped to metal trays or direct to steelwork and woodwork of vessel - cables running aft to fore above maindeck and in forecabin - & centre castle spaces are drawn 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 low voltage supply for lighting system, state position by a motor-generator with automatic starter in engine room and method of control two electrically interlocked switches with starting & controlling switches are mounted in Chartroom. remote push button control behind switchboard. Navigation Lamps, are they separately wired yes 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 pumprooms are lighted by fittings mounted in gastight steel boxes in pumproom entrances, provided with stout glass discs. and where are the controlling switches fitted in Chartroom, 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 (search light 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.	Ampères.	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	1.5	28/32	53.5/47	3000	electromotor	✓	✓

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return lead) meters.	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Core.	Sectional Area or Stranded Area sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	20	1	150	182	205	10	rubber	lead sheath & steel wire braiding.
" " EQUALISER ...								
Auxiliary Generator	20	1	150	182	205	12	"	"
Share connection		1	150	182	205	38	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR ...	2.2	1	6	21	39	7	"	"
" " GENERATOR ...	1.5	1	16	47	49	2	"	"

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS ...								
Workshop motors distr. board	1	50	100	99	80	"	"	"
Portable connections distr. board	1	10	12	38	50	"	"	"
Navigation board	1	10	10	38	100	"	"	"
Lighting distr. board midship	1	35	45	78	160	"	"	"
Lighting distr. board aft.	1	4	8	22.5	50	"	"	"
Lighting distr. board aft.	1	10	10	38	30	"	"	"
Lighting distr. board engine room	1	16	37	49	30	"	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS ...	1	16	30	49	100	"	"	"
NAVIGATION LIGHTS (5 circuits)	1	1.5	.4	9.5	12-14-210	"	"	"
LIGHTING AND HEATING								
Searchlight	1	35	78	300	"	"	"	"
Cargo lights	1	1.5	1.5	9.5	140	"	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Engine turning gear	1	7.5	1	50	61	99	60	"
Oil fuel transfer pump	1	2	1	4	17	22.5	35	"
Oil purifier	1	2	1	4	17.7	22.5	40	"
Engine room ventilator	1	2	1	4	16.2	22.5	30	"
Ventilator midship accomm.	1	3	1	10	26.7	38	160	"
Lathe	1	1.5	1	2.5	10.6	15.5	10	"
Grinding stone	1	3	1	6	24.6	29	20	"
Drilling machine	1	2	1	6	17.7	29	10	"

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.

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

Electrical Engineers.

Date 20/5/39

COMPASSES.

Minimum distance between electric generators or motors and standard compass 45 ft. (rotary converter of wireless station)

Minimum distance between electric generators or motors and steering compass 42 ft. (ventilator midship accommodation)

The nearest cables to the compasses are as follows:—

A cable carrying 1 Ampères 1 feet from standard compass 1 feet from steering compass. Compass Lighting

A cable carrying 2 Ampères 4 feet from standard compass 4 feet from steering compass. Wheelhouse Lighting

A cable carrying 1 Ampères 9 feet from standard compass 3 feet from steering compass. electr. telegraph.

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.

WILSON-FIJENOORD.
(N.V. WILSON-FIJENOORD Scheepswaard.
(WILSON'S Engineering & Shipway Co.)
Maatschappij voor Scheeps en Werktuigbouw

Builder's Signature.

Date

Is this installation a duplicate of a previous case yes If so, state name of vessel "CERONIA"

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.

Total Capacity of Generators 40 Kilowatts.

The amount of Fee ... f 300.00 : When applied for, 1.6.19.39

Travelling Expenses (if any) f 6.00 : When received, 23.6.19.39

H. van der Wijk.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI 9 JUN 1939

See F.E. mach r/H



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Foundation