

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

MAY -4 1939

Received at London Office.....

Date of writing Report... 21-4-1939 When handed in at Local Office.....19..... Port of RotterdamNo. in Survey held at Rotterdam Date, First Survey 28-1-39 Last Survey 13-4-1939
Reg. Book. (Number of Visits.....7.....)on the motor tankship "CLAVELLA" Tons {Gross 8006.63
Net 4710.17Built at Rotterdam By whom built Rott Droogdok Mij. Yard No. 211 When built 1938/43Owners N.V. Petroleum Mij. "LA CORONA" Port belonging to 's GravenhageElectrical Installation fitted by V. Rietschoten & Haanstra Elektrotechn. Mij. N.V. Contract No. When fitted 1938Is 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 110Heating ✓ 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 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 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 engine room on 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, 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, 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: a double pole change over switch (also for shore connection) & double polefuses — motor driven generator: a double pole switch & double pole fusesand for each outgoing circuit: a double pole change over switch & double pole fusesAre 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 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 yes, have they been tested under working conditions yes. 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 yes, 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 yes with insulating compound yes or waterproof insulating tape yes. 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 yes. State how the cables are supported and protected in engine room and in accommodation: clipped to metal trays or direct to woodwork and steelwork of vessel. — main cable runs on weatherdeck from aft to midship and foreship: in conduit — in centre castle space and in fore-castle: in 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 yes and method of control yes. 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 pump room entrances: fittings in gastight metal boxes with stout glass discs, wiring outside the compartments. Centre castle and fore-castle: special gastight Wigan fittings with stout prismatic lenses, wiring entirely in gastight conduit. pump room lighting and fore-castle: in Chart room. Centre castle: 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 onboard are their fittings as per Rule yes. Heating and Cooking, is the general construction as per Rule yes. are the frames effectually earthed yes, are heaters in the accommodation of the convection type yes. 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 yes and vertically yes. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing yes. 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 motor	diesel oil	above 150°F.
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area of each conductor sq. mm.	In the Circuit.	Per Pole.			
MAIN GENERATOR ...	20	1	150	182	205	13	rubber	lead-sheath - steel wire braiding.
" " EQUALISER ...								
Auxiliary generator	20	1	150	182	205	18	"	"
Shore connection	✓	1	150	200 (use)	205	44	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR ...								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS ...								
Navigation Board	1	10	10	38	170	"	"	"
Workshop motors distr. board	1	70	100	125	66	"	"	"
Port connections distr. board	1	10	12	38	43	"	"	"
Midship lighting distr. board	1	35	55	70	100	"	"	"
Aft lighting distr. board	1	6	10	29	44	"	"	"
Crew's quarters lighting distr. board	1	10	15	38	38	"	"	"
Engine room lighting distr. board	1	16	38	49	37	"	"	"
Lighting distr. board in fore-ship (from Chart room)	1	6	2	29	104	"	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS ...	1	16	37	49	214	"	"	"
NAVIGATION LIGHTS (5 circuits) ...	1	1.5	.4	9.5	14-130	"	"	"
LIGHTING AND HEATING ...								
Searchlight (connection only)	1	35	✓	70	318	"	"	"
Cargo lights in masts	1	1.5	1.5	9.5	106	"	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Engine turning gear	1	7.5	1	25	60	63	51	"
Oil fuel transfer pump	1	2	1	4	17	22.5	66	"
Oil purifier	1	2	1	4	17.1	22.5	19	"
Lathe	1	1.5	1	2.5	13.8	15.5	10	"
Grinding stone	1	3	1	4	24.5	22.5	10	"
Drill	1	2	1	4	17.7	22.5	14	"
Engine room ventilator	1	2	1	10	16.2	38	32	"
Midship accommodation ventilator	1	3.25	1	10	26.7	38	150	"

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 Rietschoten & Houwens
Electro-Technische Maatschappij N.V.
ROTTERDAM.

Electrical Engineers.

Date 26/4 39

COMPASSES.

Minimum distance between electric generators or motors and standard compass 9ft (motor of clear view screen)
26ft (motor generator of wireless station)
22ft (battery of emergency wireless transmitter)

Minimum distance between electric generators or motors and steering compass 9ft (motor of clear view screen)
58ft (motor of ventilation on boat deck)
28ft (motor generator of wireless station)

The nearest cables to the compasses are as follows:—

A cable carrying 15 Ampères 1 foot from standard compass 1 foot 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.

DE ROTTERDAMSCHЕ BROODBOEK M.V.

Builder's Signature. Date 1.5.1939

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
L.H.
16/5/39

Total Capacity of Generators. 40 Kilowatts.

The amount of Fee ... £ 300,00 : When applied for, 1.5.1939

Travelling Expenses (if any) £ 0,00 : When received, 5.6.1939

H. van der Wyk.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 16 MAY 1939

Assigned See Ref. JC 28128