

Rpt. 13.

No. 32583

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 14 SEP

Date of writing Report 10/7 1950 When handed in at Local Office 20/7 1950 Port of Rotterdam

No. in Survey held at Rotterdam Date, First Survey 30-6-49 Last Survey 21-7-1950  
Reg. Book.

(No. of Visits 29)

57338 on the Motor Tanker "Director Madariaga"  
Built at Rotterdam By whom built P. Hunt Yard No. 596 When built 6/50  
Owners Yacimientos Petroliferos Fiscales Port belonging to Buenos Aires

Installation fitted by A. de Moor NV. When fitted 6/50

Is vessel equipped for carrying Petroleum in bulk ☒ Is vessel equipped with D.F. ☒ E.S.D. ☒ Gy.C. ☒ Sub.Sig. ☒ Radar ☒Plans, have they been submitted and approved ☒ System of Distribution Two wire insulated Voltage of Lighting 110

Heating 220 Power 220 D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency —

Prime Movers, has the governing been found as per Rule when full load is thrown on and off ☒ Are turbine emergency governors fittedwith a trip switch — Generators, are they compound wound ☒ and level compounded under working conditions ☒if not compound wound state distance between generators — and from switchboard — Are the <sup>main</sup> generators arranged to runin parallel ☒ are shunt field regulators provided ☒ Is the compound winding connected to the negative or positive 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 ☒ and the results found as per Rule ☒

Position of Generators Main Generators: E.R. port and star side resp. floor level. Motor-generators (lighting): Boat deck

is the ventilation in way of generators satisfactory ☒ are they clear of inflammable material and protected from mechanical injury anddamage from water, steam and oil ☒ Switchboards, where are main switchboards placed E.R. 1<sup>st</sup> platform against

forward bulkhead. Main switchboard lighting is placed on boat deck

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

steam and oil ☒ what insulation is used for the panels dead front type switchboard 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 — Is the construction as per Rule, including locking of screws and nuts ☒ Description of Main Switchgear

for each generator and arrangement of equaliser switches 3-pole manually operated C.B. with O/C trips in twin

poles and A.C. trip on positive pole third pole used for equaliser. C.B. equipped with pressure tripping

relay and h/v trip

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. I.P. or I.P.D.T. switches and I.P. fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule ☒ Instruments on main switchboard 9

ammeters 2 voltmeters — synchronising devices. For compound machines in parallel are the ammeters and reversed current

protection devices connected on the pole opposite to the equaliser connection ☒ Earth Testing, state means provided earthindicating lamps protected by I.P. fuses and connected to <sup>PE</sup> through S.P. push buttonSwitches, Circuit Breakers and Fuses, are they as per Rule ☒ are the fuses an Approved Type ☒make of fuses Lecher are all fuses labelled ☒ If circuit breakers are provided for the generators, at what

overload do they operate time delay 1500 amp. and at what current do the reversed current protective devices operate 15 amp

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule ☒Cables, are they insulated and protected as per Rule ☒ 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 60% are the ends of all cables having a sectional

area of 0.01 square inch and above provided with soldering sockets ☒ Are all paper insulated and varnished cambric insulated

cables sealed at the ends — 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 ☒ are any cables laid under machines or floorplates ☒ if so, are theyadequately protected ☒ Are cables in machinery spaces, galleys, laundries, etc., lead covered ☒ or run in conduit ☒

or of the "HR" type — State how the cables are supported or protected Machinery spaces: h.c. h.w. B cable clipped

to metal frame work or perforated plating. Accommodation spaces: h.c. cable clipped to surface or

wood grounds along underside of fore and aft gangway: h.c. &amp; h.w. B cable fitted in a sheet

iron trunk covered with sheet iron plates

Are all lead sheaths, armouring and conduits effectually bonded and earthed ☒ Are all cables passing through decks and watertightbulkheads provided with deck tubes or watertight glands ☒ where unarmoured cables pass through beams, etc., are the holeseffectively bushed ☒ Refrigerated chambers, are the cables and fittings as per Rule ☒

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Lloyd's Register  
Foundation

F.E. 4/18



LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. *Yes* Emergency Supply, state position *Emergency battery placed on boat deck*

Navigation Lamps, are they separately wired. *Yes* Are the switches and fuses in a position accessible only to the officers on watch. *Yes* Is an alternative supply provided. *Yes*

Secondary Batteries, are they constructed and fitted as per Rule. *Yes* Are they adequately ventilated. *Yes*

state battery capacity in ampere hours. *Emergency battery, nickel iron type, 92 cells, 100 amp. hours, 110 volts, Nishi Kiki*

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. *Yes*

Are any 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. *Flame proof type fittings* Are all fittings suitably ventilated. *Yes*

and where are the controlling switches fitted. *outside this space*

Searchlight Lamps, No. of. *1* whether fixed or portable. *Yes* are they of the carbon arc or of the filament type. *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 and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil. *Yes*

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped, from a position accessible in the event of fire in the pump compartment. *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 sea 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 an Approved Cartridge Type. *Yes* make of fuse. *Lehes* Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. *Yes* Are the cables lead covered as per Rule. *Yes*

E.S.D., if fitted state maker. *Hughes* location of transmitter. *double bottom p. 57* and receiver. *double bottom p. 57*

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations. *Yes*

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. *Yes*

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT			Revs. per Min.	TYPE.	MAKER.
			Kilowatts per Generator.	Volts.	Ampères.			
MAIN	2	Prulink Thompson - Houston	230	220	1045	425	Diesel engine	Prulink Thompson & Houston
Harbour & EMERGENCY ROTARY TRANSFORMER	2	Smit - Nishikawa	26	110	235	2000	Electric motor	Smit Nishikawa
	1	Prulink Thompson - Houston	30	220	139	1000	Diesel engine	Prulink Thompson

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR I	230	5	185	1045	1175	30		
" " EQUALISER	230	3	185	1045	1175	19		
" " II	230	5	185	1045	1175	32		
" " equaliser	26	3	185	235	235	8		N.Y.R. h.l. & h.w.B.
lighting generator I	26	1	185	235	235	12		
" " II	26	1	185	235	235	12		
Harbour & EMERGENCY GENERATOR	30	1	120	139	173	16		
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.								
Power 220 Volt								
Main switchboard placed in E.R.								
Supplied from main generators only								
Aux. switchboard placed on boat deck								
Central starter panel placed in E.R.								
Supplied from main generators controlled by P.R.								
J.F.B. domestic app. heating 2nd pass. "H.C."								
" ventilation fans are aft "H.C."								
" " middle "H.C."								
Supplied from main gen. alt from harbour gen. controlled by P.R.								
J.F.B. refrigerating plant alt "H.C."								
" heating first class pass. "H.C."								
" crew (domestic app.) "H.C."								
" power workshop "H.C."								
" hydrovac. pumps. "H.C."								

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Continuation Power 220V.							
Supplied from aux. switchboard (part of main switchboard lighting)	1	25	29	63	220		
Wireless equipment	1	25	17	63	220	N.Y.R.	h.l. & h.w.B.
Emergency supply em. bilge pump	1	50	24	99	20		
Alt supply part of main switchboard lighting 220V.	1	50	40	99	102		
Main switchboard placed on boat deck							
Supplied from motor generators only							
Aux. lighting switchboard in E.R. (part of main switchboard)	1	150	200	205	90	"	" & "
Supplied from motor generators alt Emergency battery							
J.F.B. emergency lighting after "H.C.-H.C."	4	4	9	225	66		
" " " " "H.C."	1	4	45	225	60		
" " " " "H.C."	1	4	13	225	230		
" " " " "H.C."	1	4	12	225	100		
" " " " "H.C."	1	4	42	225	13		" & "
" " " " "H.C."	1	16	65	49	246		
Supply charging equipment 24 volts battery	1	4	2	225	256		
Supplied from aux. lighting switchboard E.R. (part of main switchboard E.R.)							
J.F.B. lighting aft ship "H.C.-H.C."	1	40	35	30	52		
" " " " "H.C.-H.C."	1	40	26	30	100		
" " " " "H.C.-H.C."	1	15	40	63	160		
" " " " "H.C.-H.C."	1	46	19	49	162		" & "
" " " " "H.C.-H.C."	1	4	14	225	52		
" " " " "H.C.-H.C."	1	4	17	225	48		
" " " " "H.C.-H.C."	1	4	14	225	116		
" " " " "H.C.-H.C."	1	16	16	49	166		

ALL IMPORTANT MOTORS TO BE ENUMERATED.								
MOTOR CABLES.								
Power 220V								
Main switchboard placed in E.R.								
Supplied from main generators only								
Steering gear motor 1								
" " " 2								
Turning gear motor 1								
" " " 2								
Emergency bilge pump								
Supplied from main generators controlled by P/R								
Oil fuel transfer pump								
Ventilation fans accomm.								
Supplied from main generators alt from harbour generators controlled by P/R								
Ink oil separators								
Oil fuel centrifuges								
Tackle motors								
Sanitary pump								
Harbour cooling water pump								
Oil fuel day pump								
Supplied from aux. switchboard (part of main switchboard lighting)								
Water of motor generator lighting								
" " " " "H.C."								
Supplied from central starting panel								
Ink oil pump								
Ink cooling water pump								
Ink oil pump								
Ink cooling water pump								
Ink cooling water pump								
Supplied from J.F.B. "H.C."								
Water fire pump								
Water hydropneum. pump								
" " " " "H.C."								
Ink water pump ref. equipm.								
Water hydropneum. pump								
" " " " "H.C."								



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.

*A. de Hoop*  
"A. de HOOP" N.V.

Electrical Contractors.

Date *18<sup>th</sup> August 1950*

#### COMPASSES.

Have the compasses been adjusted under working conditions *yes*

Builder's Signature.

Date

Have the foregoing descriptions and schedules been verified and found correct *yes*

Is this installation a duplicate of a previous case *no* If so, state name of vessel *—*

Plans. Are approved plans forwarded herewith *no* If not, state date of approval *12-7-50*

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith *yes*

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

*The electrical equipment and installation of this vessel has been constructed and installed under Special Survey in conformity with the Society's Rules and Regulations and Secretary's letters and the approved plans.*

*The materials used are of good quality and the design and workmanship are good.*

*Insulation and other tests have been carried out with satisfactory results. On completion the equipment has been tried out under full working conditions and found satisfactory.*

*This equipment is in my opinion suitable for a classed vessel having the notation "Carrying Petroleum in Bulk".*

Total Capacity of Generators *486* Kilowatts.

The amount of Fee ...

*£ 142.50 =*

When applied for,

*10.6.1950*

Travelling Expenses (if any) *£ 50 =*

When received,

*15-7-1950*

*W. H. D. BLUIG*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*FRI. 17 NOV 1950*

Assigned

*See F.E. mchey rpt.*