

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

APR -4 1940

Received at London Office.....

Date of writing Report. 23rd Mar, 1940 When handed in at Local Office. 1 APR 1940 Port of SumnerlandNo. in Survey held at Sumnerland Date, First Survey 15th Jan, Last Survey 20th Mar, 1940
Reg. Book. Supp. (Number of Visits.....)39916 on the M.V. "LA CORDILLERA" Tons { Gross. 51.85
Net. 3050Built at Sumnerland By whom built 17th Street & Am. La Yard No. 655 When built 1940Owners Burris Marine, Ltd Port belonging to LondonElectrical Installation fitted by The Sumnerland Eng. Co. Ltd Contract No. 655 When fitted 1940Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. NoHave plans been submitted and approved. Yes System of Distribution Simple wire Voltage of supply for Lighting 110Heating. Power 110 Direct Alternating Current, Lighting Yes Power Yes 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 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 Engine room starboard sideforward, 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. Engine room starboard side onforward bulkhead near generatorsare 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. Linoleum, if of synthetic insulating material is it an Approved Type. Yes, if ofsemi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule. 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. Simple polecircuit breaker with 0/2 protection on both polesand for each outgoing circuit. Simple pole double throw knife switch anddouble pole fuseAre compartments containing switchboards composed of fire-resisting material or lined as per Rule. Instruments on main switchboard Twoammeters. Two voltmeters. synchronising devices For compound machines in parallel is the ammeter connected on the pole opposite to theequaliser connection. Earth Testing, state means provided. 2 lamps connected to 2 lamps fused only

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 1.5 lb/sq. in. 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 V.L.R. cables run in h.g. secured against in fire main and machinery spaces; "Pyrotex" cable clipped to beam in boiler rooms; L.C.B. cable clipped to surface of wood ground in accommodation. 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 Kept in charge of battery in tank on open deck and method of control Control operated on failure of 110V ship lighting supply. 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 Yes. and where are the controlling switches fitted Yes, are all fittings suitably ventilated Yes. are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of Yes, whether fixed or portable Yes, 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	20	110	182	600	Single engines steam engines		
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 For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATORS	2 x 20kw	1	37/0.064	182	210	80190	V.L.R.	L.C.B.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS								
Cargo Ldg. & Red Ldg. S.B. feed	1	7/0.064	38	46	130	V.L.R.	In main	
Supply to Red Ldg. & S.B. feed	1	7/0.064	20	31	31+120	V.L.R.	In main	
App. Cargo Ldg. & S.B. feed	1	7/0.064	18	31	160	V.L.R.	In main	
Engine Room S.B. feed	1	7/0.052	34	37	130	V.L.R.	In main	
Supply - Sanitary Pump	1	7/0.036	17	24	40	V.L.R.	In main	
Workshop Motor	1	7/0.044	17	31	2	V.L.R.	In main	

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/0.064	15	46	460	V.L.R.	In main & L.C.B.	
NAVIGATION LIGHTS	1	7/0.064	13	46	460	V.L.R.	In main & L.C.B.	
LIGHTING AND HEATING								
Crew Mess. Ldg. S.B.	1	7/0.044	7	31	580	V.L.R.	In main	
Engin. Room Ldg. S.B.	1	7/0.064	15	46	130	V.L.R.	In main	
App. Cargo Ldg. S.B.	1	7/0.064	20	46	400	V.L.R.	In main & L.C.B.	
Engine Room Ldg. S.B.	1	7/0.044	28	31	40	V.L.R.	In main	
Charging Board feed	1	7/0.036	6	24	180	V.L.R.	In main & L.C.B.	

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Oil Pumps	2	2	1	7/0.044	18.5	31	50	V.L.R. In main
Pressing Pump	1	1.5	1	7/0.044	13.5	31	80	V.L.R. In main
Refig. Truck	2	2.01	1	7/0.044	17.9	31	880	V.L.R. In main
Engine Room Crane	1	2	1	7/0.044	17	31	100	V.L.R. In main
Sanitary Pump	1	1						
Workshop Motor	1	2						

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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.

CAMPBELL & ISHERWOOD, LTD.

PER *Thomas Wade*

Electrical Engineers.

Date *28th March 1940*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *95 feet*

Minimum distance between electric generators or motors and steering compass *90 feet*

The nearest cables to the compasses are as follows:—

A cable carrying *14* Ampères *on the* feet from standard compass *7* feet from steering compass.

A cable carrying *14* Ampères *7* feet from standard compass *on the* 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 *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.

WILLIAM DOXTORD & SONS, Limited,

William Doxtord

Builder's Signature.

Date *Mar. 30th/40*

Director.

Is this installation a duplicate of a previous case *Yes*

If so, state name of vessel *M.V. "La Lézarde"*

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 installed under special survey. The materials used and the workmanship are good. On completion the equipment was run under working conditions, the governing, regulation and commencing of the generator sets were tested, the insulation resistances of all circuits was measured and the spare gear was checked. This equipment is in my opinion suitable for a classed vessel.

Noted

L.H.
8/4/40.

Total Capacity of Generators *440* Kilowatts.

The amount of Fee ... £ *25* : - : { When applied for, *2 APR 1940*

Travelling Expenses (if any) £ : : { When received, *5th Apr 1940*

Blunt

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 9 APR 1940

Assigned

See Sld 76 32832



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