

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 Sunderland

No. in Survey held at Sunderland 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. 5185
Net. 3050

Built at Sunderland By whom built Wm. Dorman & Sons Ltd Yard No. 655 When built 1940

Owners Burris Marine Ltd Port belonging to London

Electrical Installation fitted by The Sunderland Eng. Co. Ltd Contract No. 655 When fitted 1940

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

Have plans been submitted and approved Yes System of Distribution Single wire Voltage of supply for Lighting 110

Heating..... 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 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 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 Engine room starboard side

forward, 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 Engine room starboard side on

forward bulkhead near generator

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 Linoleum, if of synthetic insulating material is it an Approved Type Yes, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule..... 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 Double pole

circuit breaker with 0/2 protection on both poles

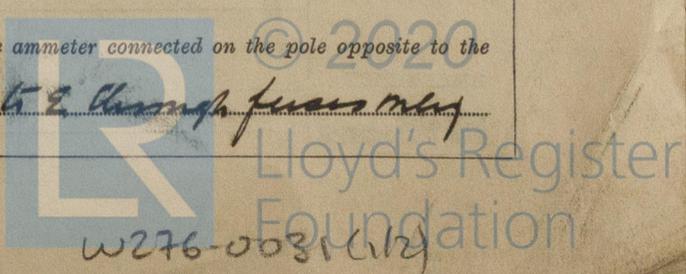
and for each outgoing circuit Single pole double throw knife switch and

double pole fuse

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

ammeters Two 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 2 lamps connected to 2 clamp fuses on



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 less than 1/32 inch 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 turnabouts and machinery spaces; "Pyrotuned" cables clipped to trays in boiler rooms; L.C.B. cables clipped to surface of wood grounds 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 Keypad charging battery in tank on open deck and method of control Contacts operated on failure of 110V ship lighting supply. Navigation Lamps, are they separately wired Yes controlled by separate single 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	37/064	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. & Fed. Ldg. etc. feeds	1	7/064	38	46	130	V.L.R.	In conduit	
supply to Ldg. & Fed. Ldg. etc.	1	7/064	20	31	301/20	V.L.R.	In conduit	
app. Cargo Ldg. & Fed. Ldg. etc.	1	7/064	18	31	160	V.L.R.	In conduit	
Engine Room S.B. feeds	1	7/052	34	37	130	V.L.R.	In conduit	
supply - Sanitary Pump	1	7/036	17	24	40	V.L.R.	In conduit	
Workshop Motor	1	7/064	17	31	2	V.L.R.	In conduit	

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS								
NAVIGATION LIGHTS	1	7/064	15	46	460	V.L.R.	In conduit & L.C.B.	
LIGHTING AND HEATING	1	7/064	19	46	460	V.L.R.	In conduit & L.C.B.	
Crew Mess. Ldg. etc.	1	7/044	7	31	580	V.L.R.	In conduit	
Engin' Room Ldg. etc.	1	7/064	15	46	130	V.L.R.	In conduit	
App's. Cargo Ldg. etc.	1	7/064	20	46	400	V.L.R.	In conduit & L.C.B.	
Engine Room Ldg. etc.	1	7/044	28	31	40	V.L.R.	In conduit	
Charging Board feeds	1	7/036	6	24	180	V.L.R.	In conduit & L.C.B.	

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Oil Pumps	2	2	1	7/044	11.5	31	50	V.L.R.	In conduit
Pressing Pump	1	1.5	1	7/044	13.5	31	60	V.L.R.	In conduit
Refig. Truck	2	2.01	1	7/044	17.9	31	880	V.L.R.	In conduit
Engine Room Crane	1	2	1	7/044	17	31	100	V.L.R.	In conduit
Sanitary Pump	1	1							
Workshop Motor	1	2							

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 Meade*

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 & BONS, Limited,

W. Murray Colclough

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 Colmanis"*

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 open gear was checked. This equipment is in my opinion suitable for a classed vessel.

*Noted
L.H.
8/4/40.*

Total Capacity of Generators *40* Kilowatts.

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

Travelling Expenses (if any) £ : : When received, *S.H. 19.40*

Bluntson

Surveyor to Lloyd's Register of Shipping.

TUE. 9 APR 1940

Committee's Minute

Assigned *See Sld. FC. 32832*

2m, 10, 38.—Transfer. (MADE IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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