

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

JAN - 2

Received at London Office.....

Date of writing Report 14th December 1940 When handed in at Local Office 31.12.1940 Port of Glasgow.

No. in Survey held at Glasgow. Date, First Survey 9.10.40 Last Survey 21st December 1940
Reg. Book. (Number of Visits.....13.....)

90211 on the S.S. "TRADER" Tons {Gross 6087
Net 3726

Built at Glasgow. By whom built C. Connell & Co Ltd. Yard No. 430. When built 1940

Owners Charente S.S. Co Ltd. Port belonging to Liverpool.

Electrical Installation fitted by H. T. Robertson & Co. Contract No. 430. When fitted 1940.

Is vessel fitted for carrying Petroleum in bulk..... Is vessel equipped with D.F..... E.S.D..... Gy.C..... Sub.Sig.....

Have plans been submitted and approved Yes System of Distribution Single Wire Hull Return. Voltage of supply for Lighting 110.

Heating..... Power 110. Direct or Alternating Current, Lighting direct Power direct 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..... Yes 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 in engine room

....., 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..... near generators.

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..... Insulation, 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.....

S.P. Surtel and Luce

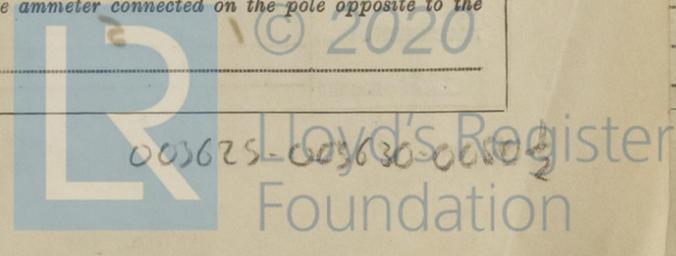
and for each outgoing circuit.....

S.P. Surtel and Luce

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule..... 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.....



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 51 db, 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 —, if so, are they adequately protected —. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —. State how the cables are supported and protected Main R.R. in galvanized pipe, wiring in Machinery space L.C.A.B. clippa Accommodation L.C. clippa.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. Refrigerated chambers, are the cables and fittings as per Rule —. 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 effectually 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 Special compartment off engine room alleyway and method of control own switch board. Navigation Lamps, are they separately wired Yes controlled by separate double pole switches SP. Switches and fuses SP. fuses. 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 —, are they adequately ventilated —. 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 —, if so, how are they protected — and where are the controlling switches fitted —, are all fittings suitably ventilated Yes. Are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of 1, whether fixed or portable portable, are their fittings as per Rule Yes. Heating and Cooking, is the general construction as per Rule —, are the frames effectually earthed —, are heaters in the accommodation of the connection 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 —. Control Gear and Resistances, are they constructed and fitted as per Rule Yes. Lightning Conductors, where required are they fitted as per Rule —. 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 —, are all fuses of the cartridge type — are they of an approved type —. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type —. 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			Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.
MAIN ...	1	15	110	136	450	Steam engine		
	1	7½	110	66	680	Steam engine		
EMERGENCY ...	1	5	110	45.5	1500	IC engine	above 150° F.	
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet plus return lead).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	Nº1 15	1	87.072	136	152	8	Rubber	L.C.
" " ...	Nº2 7½	1	19.064	65	83	10	"	L.C.
EMERGENCY GENERATOR ...	5	1	7.064	45.5	46	9	"	L.C.
ROTARY TRANSFORMER: MOTOR ...								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (feet plus return lead).	INSULATED WITH.	HOW PROTECTED.
AUX. SWITCHBOARDS AND SECTION BOARDS ...						
MAIN SW B ^d to Aux ^{ly} SW BA	1	19.072	88	152 97	60	L.C.

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (feet plus return lead).	INSULATED WITH.	HOW PROTECTED.		
WIRELESS ...		1	7.029	5	15	39	Rubber	IN CONDUIT
NAVIGATION LIGHTS ...		1	7.029	6	15	174	"	" "
LIGHTING AND HEATING								
POOP L ^{ts} DB.		1	7.029	12	15	150	"	" "
ENGINE ROOM L ^{ts} DB.		1	7.029	13	15	10	"	" "
OFFICERS & ENGINEERS DB.		1	7.044	25	31	30	"	" "
SALOON ACCOMMODATION.		1	7.036	16	24	144	"	" "
CARGO FORWARD		1	7.036	15	24	240	"	" "
" AFT		1	7.036	15	24	180	"	" "
PROJECTOR		1	7.064	45	46	300	"	" "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (feet plus return lead).	INSULATED WITH.	HOW PROTECTED.	
REFRIG MACHINERY DB.	—	—	1	7.064	36	46	60	" " "
ASH HOIST	1	3	1	7.064	26	46	100	" " "

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.

H. T. Robertson & Co.

Electrical Engineers.

Date *24/12/40*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *25 feet.*

Minimum distance between electric generators or motors and steering compass *20 feet.*

The nearest cables to the compasses are as follows:—

A cable carrying *36* Ampères *64 in* feet from standard compass *64 in* feet from steering compass.

A cable carrying *6* Ampères *10* feet from standard compass *10* 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 *any* course in the case of the standard compass, and *nil* degrees on *any* course in the case of the steering compass.

W. Ballantyne SECRETARY

Builder's Signature.

Date *27/12/40*

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 survef, tested under full working conditions and found satisfactory. The materials and workmanship are good.

Noted

L. J. 6/1/41.

Rob 31/12/40

Total Capacity of Generators *27½* Kilowatts.

The amount of Fee ... £ *21 : 5* : _____

When applied for, *31 DEC 1940*

Travelling Expenses (if any) £ _____ : _____ : _____

When received, *10-19-40*

S. G. F. J. ... R. I. ...

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 31 DEC 1940*

SEE ACCOMPANYING MACHINERY REPORT.

Assigned _____

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



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