Rpt. 13. No. 42623

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office WED. APR. 18 1923

Date of writing Report 9/4/23 19 When handed in at Local Office 16.4.1923 Port of Glasgow.

No. in Reg. Book. 78465 Survey held at GLASGOW. Date, First Survey 19.10.1922 Last Survey 3.4.1923 (Number of Visits 15)

on the S.S "CONTE VERDE" Tons Gross 18.000 Net 10.000

Built at DALMUIR. By whom built Wm BEARDMORE & Co Yard No. 612. When built 1923

Owners LLOYD SABUDO SOC. ANON. PER AZIONI Port belonging to GENOA.

Electric Light Installation fitted by Wm BEARDMORE & Co Contract No. 612 When fitted 1923.

System of Distribution 2-WIRE

Pressure *of supply for* **Lighting** 110 *volts,* **Heating** 110 *volts,* **Power** 110 *volts.*

Direct or Alternating Current, Lighting Direct **Power** Direct

If alternating current system, state frequency of periods per second ✓

Has the **Automatic Governor** *been tested and found efficient when the whole load is suddenly thrown on or off* Yes

Generators, *do they comply with the requirements regarding overload* Yes, *are they compound wound* Yes *are they over compounded 5 per cent.* yes., *if not compound wound state distance between each generator* —

Where more than one generator is fitted are they arranged to run in parallel Yes, *is an adjustable regulating resistance fitted in series with each shunt field* Yes

Are all terminals accessible and clearly marked Yes, *are they so spaced or shielded that they cannot be accidentally earthed, or short circuited* Yes *Are the lubricating arrangements of the generators as per Rule* Yes

Position of Generators Refrigerating Machinery Space Hold,

is the ventilation in way of the generators satisfactory Yes, *are they clear of all inflammable material* Yes,

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — *and* —, *are the generators protected from mechanical injury and damage from water, steam or oil* —,

are their axis of rotation fore and aft Yes

Earthing, *are the bedplates and frames of the generating plant efficiently earthed* Yes *are the prime movers and their respective generators in metallic contact* Yes

~~Main Switch Boards~~ Remote Control Switchboard, *where placed* Refrigerating Machinery Space Hold

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, *are they placed in accessible positions, free from inflammable gases and acid fumes* Yes,

are they protected from mechanical injury and damage from water, steam or oil Yes, *if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards* — *and* —,

are they constructed wholly of durable, incombustible non-absorbent materials Yes, *is all insulation of high dielectric strength and of permanently high insulation resistance* Yes, *if semi-insulating material is used, are all conducting parts connected to one pole insulated from the slab with mica or micanite and the slab similarly insulated from its framework* —, *and is the frame effectively earthed* Yes. *Are the following fittings as per Rule, viz. :— spacing or shielding of live parts* Yes, *accessibility of all parts* Yes, *absence of fuses on back of board* Yes, *proportion of omnibus bars* Yes, *individual fuses to voltmeter, pilot or earth lamp* Yes, *connections of switches* Yes

Main Switchgear, *description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches* Each Generator is protected by a D.P. Circuit Breaker having an equalising switch and having the usual over load and Reverse current trips.

Instruments *on main switchboard* 3 *ammeters* 3 *voltmeters* — *synchronising device for paralleling purposes.*

Earth Testing, *state what means are provided at the main switchboard for indicating the state of the insulation of the system* Leakage Indicator and Earth lamps

Switches, Circuit Breakers and Fusible Cut-outs, *do these comply with the requirements of the Rules* Yes

Section and Distribution Boards, *is the construction, protection, insulation, material, and position of these as per rule* Yes

© 2020 Lloyd's Register Foundation

Insulation of Cables, *state type of cables, single or twin* Single *are the cables insulated and protected as per Tables* III *or* IV *of the Rules* 710.

Fall of Pressure, *state maximum between bus bars and any point of the installation under maximum load* 2·85.

Cable Sockets and other connections, *are the ends of all cables having a sectional area of* 0·007 *square inch and above provided with soldering sockets* —

Paper Insulated Cables. *If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound* —

Cable Runs, *are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage* Yes

Support and Protection of Cables, *state how the cables are supported and protected* Lead covered and armoured cables are clipped to frames. Taped and braided cables are run in wood casing

If cables are run in wood casings, are the casings and caps secured by screws Yes, *are the cap screws of brass* Yes, *are the cables run in separate grooves* Yes. *If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table* VI Yes

Refrigerated Chambers, *if lights are fitted, are the cables and fittings in accordance with the special requirements* Yes

Joints in Cables, *state if any, and how made, insulated, and protected* No Joints

Watertight Glands and Deck Tubes, *are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands* Yes

Bushes in Beams and Non-watertight Positions, *where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed* Yes *state the material of which the bushes are made* Lead

Earthing Connections, *state what earthing connections are fitted and their respective sectional areas* ✓

, *are their connections made as per Rule* ✓.

Alternative Lighting, *are the groups of lights in the propelling machinery space arranged as per Rule* Yes.

Emergency Supply, *state position and method of control of the emergency supply and how the generator is driven* The Generator is driven by an oil Engine direct Coupled

Navigation Lamps, *are these separately wired* Yes, *controlled by separate switch and separate fuses* Yes, *are the fuses double pole* Yes, *are the switches and fuses grouped in a position accessible only to the officers on watch* Yes, *has each navigation lamp an automatic indicator as per Rule* Yes, *are separate screens provided for the use of oil and electric side lights* yes. *are separate oil lanterns provided for the mast head lights and side lights* yes.

Fittings, *are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight* Yes, *are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected* no —

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected No

, *how are the cables led* ✓

where are the controlling switches situated ✓

Searchlight Lamps, No. of —, *whether fixed or portable* —, *are their fittings as per Rule* —.

Arc Lamps, *other than searchlight lamps, No. of* —, *are their live parts insulated from the frame or case* —, *are their fittings as per Rule* —

Motors, *are their working parts readily accessible* Yes, *are the coils self-contained and readily removable for replacement* Yes, *are the brushes, brush holders, terminals and lubricating arrangements as per Rule* Yes, *are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material* Yes, *are they protected from mechanical injury and damage from water, steam or oil* Yes *are their axis of rotation fore and aft* Yes, *if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type* —, *if not of this type, state distance of the combustible material horizontally or vertically above the motors* — *and* —

Control Gear and Resistances, *are the generator field and motor speed regulators, starters and controllers constructed as per Rule* Yes

Lightning Conductors, *where lightning conductors are required, are these fitted as per Rule* —

Ships carrying Oil having a Flash Point less than 150° F. *Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings* —

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office —

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT Kilowatts.	Volts.	Ampères.	Revs. per Min.	DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE. Fuel Used.	Flash Point of Fuel.
MAIN	1	150	110	1363	6000–750	Steam Turbine		
AUXILIARY ...	1	100	110	1000	" "	" "		
EMERGENCY ...	1	35	116	318	500	Oil Engine	Petrol-Paraffin	
ROTARY TRANSFORMER								

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND. No.	Diameter.	Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	MAIN GENERATOR...	6	1	124	·103	1363 ✓	60	V.I.R	Lead Covered, Armoured and Braded ✓
	AUXILIARY GENERATOR ...								
	EMERGENCY GENERATOR ...	2	0·6	91	·093	350 ✓	60	V.I.R	Lead Covered
	ROTARY TRANSFORMER... ...								
	AUXILIARY SWITCHBOARDS ...	2	1	124	·103	560 ✓	255	V.I.R	Lead Covered armoured & Braded
	ENGINE ROOM	2	·5	61	·103	263 ✓	60 ✓	V.I.R	Lead Covered armoured & Braded
	BOILER ROOM	2	·3	34	·103	34 ✓	80 ✓	V.I.R	Lead Covered armoured & Braded
	WIRELESS	2	·045	19	·042	35 ✓	360	V.I.R	Taped & Braded
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	·002	3	·029	2 ✓	800	V.I.R	Lead Covered
	SIDE LIGHTS	2	·002	3	·029	2 ✓	40	V.I.R	Lead Covered
	COMPASS LIGHTS	2	·002	3	·029	2 ✓	30	V.I.R	Lead Covered
	POOP LIGHTS								
	CARGO LIGHTS	2	·01	4	·044	12 ✓	60	V.I.R	Lead Covered armoured & Braded
	ARC LAMPS								
	HEATERS	2	·004	4	·036	9 ✓	20	V.I.R	Taped & Braded

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND. No.	Diameter.	Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS ...								
	GENERAL SERVICE PUMP ...								
	EMERGENCY BILGE PUMP ...		·5	61	·103	280 ✓	240	V.I.R	Taped & Braded
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS ...								
	CIRC. FRESH WATER PUMPS ...								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR ...		·3	34	·103	200 ✓	120	V.I.R	Lead Covered armoured & Braded
	ENGINE REVERSING GEAR ...								
	LUBRICATING OIL PUMPS ...								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR		·04	19	·052	40 ✓	120	V.I.R	Lead Covered armoured & Braded
	VENTILATING FANS		·04	19	·052	36 ✓	240	V.I.R	Lead Covered armoured & Braded

© 2020 Lloyd's Register Foundation

All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

NAVAL CONSTRUCTION WORKS ELECTRICAL DEPT. DALMUIR, N.B. 1 JAN 1923

Electrical Engineers. Date 11/4/23

COMPASSES.

Distance between electric generators or motors and standard compass Main dynamos 245 ft Emergency Dynamo 182 ft Nearest motor 40 ft

Distance between electric generators or motors and steering compass main dynamos 240 ft Emergency Dynamo 194 ft Nearest motor 36 ft

The nearest cables to the compasses are as follows :—

A cable carrying 3·2 *Ampères* 16 *feet from standard compass* 13 *feet from steering compass.*

A cable carrying 10·0 *Ampères* 16 *feet from standard compass* 13 *feet from steering compass.*

A cable carrying 2·3 *Ampères* 16 *feet from standard compass* 13 *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

The maximum deviation due to electric currents was found to be Nil *degrees on* ALL *course in the case of the standard compass, and* Nil *degrees on* Steering *course in the case of the steering compass.*

FOR WILLIAM BEARDMORE & CO., LIMITED.

A. Campbell *Builder's Signature.* Date 11/4/23

Is this installation a duplicate of a previous case Yes *If so, state name of vessel* T.S.S. "CONTE ROSSO"

General Remarks (State quality of workmanship, opinions as to class, &c. This installation has been fitted on board under special survey. Tested under full working conditions & found satisfactory in every way. The workmanship was found to be good & sound.

It is submitted that the vessel is eligible for Elec Light.

D.K. 17/4/23.

Total Capacity of Generators 285 *Kilowatts*

The amount of Fee ... ... £38 12.6. When applied for, 7. 4. 1923.

Travelling Expenses (if any) £ : : When received, 10. 4. 23 Mmst

J.S. Rankin
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 17 APR 1923

Assigned Elec. Light

1m,3,22.—Transfer.

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

HC 16.4.23

© 2020 Lloyd's Register Foundation