

RETAIN

-2 JUN 1928

Rpt. 13.

No. 45615

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 21<sup>st</sup> 4<sup>th</sup> 1926. When handed in at Local Office 19 Port of GLASGOW.

No. in Survey held at PORT GLASGOW. Date, First Survey 2<sup>nd</sup> Feb'y Last Survey 24<sup>th</sup> Apr 1926  
Reg. Book. (Number of Visits... 12.....)

40984. on the S.S. SABBIA. Tons { Gross 5942  
Net

Built at PORT GLASGOW. By whom built MESSRS THE CLYDESBY YARD No. 348 When built 1926.

Owners NAV. LIBERA TRIESTINA S.A. Port belonging to VENICE.

Electric Light Installation fitted by MESSRS CLAUD HAMILTON & CO Contract No. 348 When fitted 1926.

System of Distribution double wire distributing Enc. ✓

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 no, 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.

Position of Generators Engine Room, Are the lubricating arrangements of the generators as per Rule 5 Sect 2. ✓

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 none 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, where placed Engine Room

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 same compartment ✓

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 none 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 yes. ✓, 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

D.P. main switch and fuse for each generator and S.P. change over switches and D.P. fuses for each circuit

Instruments on main switchboard 2 ammeters 2 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 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 Sect 6 Rule 3



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

**Fall of Pressure**, state maximum between bus bars and any point of the installation under maximum load 3 Volts

**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 socket yes.

**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 no paper cables

**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 in cabin and cold storage engine room and where exposed lead covered and armoured

If cables are run in wood casings, are the casings and caps secured by screws no casings, are the cap screws of brass -, are the cables run in separate grooves -. 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 none

**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 yes, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected none, how are the cables led -, where are the controlling switches situated -

**Searchlight Lamps**, No. of none, whether fixed or portable -, are their fittings as per Rule -

**Arc Lamps**, other than searchlight lamps, No. of none, 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 yes

**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				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE	
		Kilowatts	Volts	Amps.	Revs. per Min.		Fuel Used	Flash Point of Fuel
MAIN	1	13	110	118	600	direct coupled to steam engine	-	-
AUXILIARY	1	4.5	110	68	600	" " " "	-	-
EMERGENCY								
ROTARY TRANSFORMER								

**LIGHTING AND HEATING CONDUCTORS.**

Ref. No.	DESCRIPTION	No. of Conductors	Effective Area of each Conductor, Sq. Ins.	COMPOSITION OF STRAND		Total Maximum Current, Amperes	Approximate Length (Lead and Return), Feet	Insulated with	HOW PROTECTED
				No.	Diameter				
	MAIN GENERATOR	2	.1200	34	.064	118	30	V. G. R.	Lead covered & armoured
	AUXILIARY GENERATOR	2	.0600	19	.064	68	30	" " "	" " "
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER	2	.0040	4	.036	15	280	" " "	" " "
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM	2	.0040	4	.036	12	8	" " "	" " "
	Bridge accommodation	2	.0040	4	.036	14	280	" " "	" " "
	Engineer's Cabin	2	.0030	3	.036	10	40	" " "	" " "
	Upper deck accommodation	2	.0040	4	.036	18	80	" " "	" " "
	Officer's aft	2	.0145	4	.052	23	360	" " "	" " "
	" Foreward	2	.0145	4	.052	23	240	" " "	" " "
	Link shaft motor	See below							
	hoist gear		.0045	4	.029	6.4	280	" " "	" " "
	WIRELESS	2	.0040	4	.036	15	280	" " "	" " "
	SEARCHLIGHT								
	MASTHEAD LIGHT	2	.0030	3	.036	1	280	" " "	" " "
	SIDE LIGHTS	2	.0030	3	.036	1	40	" " "	" " "
	COMPASS LIGHTS	2	.0030	3	.036	2.5	40	" " "	" " "
	POOP LIGHTS	2	.0030	3	.036	2.5	200	" " "	" " "
	CARGO LIGHTS	See above							
	ARC LAMPS								
	HEATERS								

**MOTOR CONDUCTORS.**

Ref. No.	DESCRIPTION	No. of Motors	Effective Area of each Conductor, Sq. Ins.	COMPOSITION OF STRAND		Total Maximum Current, Amperes	Approximate Length (Lead and Return), Feet	Insulated with	HOW PROTECTED
				No.	Diameter				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR	2	.0040	4	.036	18	30	V. G. R.	Lead covered & armoured
	VENTILATING FANS	1	.0025	4	.064	40	240	V. G. R.	Lead covered
	" " fan held	1	.0030	3	.036	3	50	V. G. R.	" " "

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.

*J. David Hamilton Ltd* Electrical Engineers. Date *19th May 26.*

COMPASSES.

Distance between electric generators or motors and standard compass *56 feet*  
 Distance between electric generators or motors and steering compass *45 feet*  
 The nearest cables to the compasses are as follows:—  
 A cable carrying *23* Ampères *30* feet from standard compass *25* feet from steering compass.  
 A cable carrying *3* 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.

For and on behalf of  
 THE CLYDE SHIPBUILDING & ENGINEERING CO. LIMITED  
*[Signature]* Builder's Signature. Date *20th May 1926.*  
 Secretary

Is this installation a duplicate of a previous case *Yes.* If so, state name of vessel *S. S. Perla.*

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 and sound.*

It is submitted that  
 this vessel is eligible for  
 THE RECORD. Elec light.

*[Signature]*  
 4/6/26

Total Capacity of Generators *13* *4.5* Kilowatts

The amount of Fee ... L.R. *9-16-0* R.I. *9-1-0* : *[Signature]*  
 Travelling Expenses (if any) £ *10/6* : *[Signature]*

*[Signature]*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 1 - JUN 1926*

Assigned *Glec. Light.* *[Signature]*

*A. L.*  
 31/5/26.

Im. 9.21.—11 answer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)