

# 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 21.4.26. When handed in at Local Office 10 Port of GLASGOW.

No. in Survey held at PORT GLASGOW. Date, First Survey 2nd Feb Last Survey 24th Apr 1926  
Reg. Book.

40984. on the S.S. SABBIA. (Number of Visits 12) 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 bus. ✓  
Pressure of supply for Lighting 110 ✓ volts, Heating none ✓ 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. ✓ Are the lubricating arrangements of the generators as per Rule 5 Sect 2.

Position of Generators Engine Room  
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 yes. ✓  
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

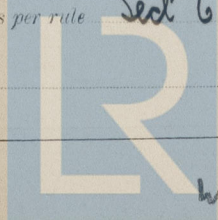
Instruments on main switchboard 2 ammeters 2 voltmeters - synchronising device for paralleling purposes.

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



Lloyd's Register Foundation

Brand wiring Single  
Insulation of Cables, state type of cables, single or twin mans. from 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 axes 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 -

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	Y. J. R.	Lead covered & armoured
	VENTILATING FANS <i>Hubbard</i>	1	.0225 ✓	4	.064	40	240	Y. J. R.	Lead covered
	" " <i>Frankel</i>	1	.0030 ✓	3	.036	3	50	Y. J. 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 Esq.

Electrical Engineers.

Date 14th 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.

Builder's Signature.

Date 20th May 1926.

Secretary

Is this installation a duplicate of a previous case. No. 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.

J. S. Rankin  
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

Travelling Expenses (if any) £ 10/6

Committee's Minute GLASGOW 1-JUN 1926

Assigned Elec. Light.



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