

Rpt. 13.

No. 9712

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 22 JAN 1924

Date of writing Report 19. 1. 1924 When handed in at Local Office 19. 1. 1924 Port of Genoa

No. in Survey held at Genoa Date, First Survey Feb. 1926 Last Survey 12th Jan. 1924
Reg. Book. 81459 on the Quad. No. "Roma" (Number of Visits 40)

Tons { Gross 32582.8
Net 19357.69

Built at Sestri Ponente Genoa By whom built Ansaldo S.A. Yard No. When built 1926

Owners Navigazione Gen. Italian Port belonging to Genoa

Electric Light Installation fitted by Officina Allettamento e Riparazioni Nav. Contract No. When fitted 1926

System of Distribution Ring. One ring for power, one for LIGHT. Two conductors on each RING.

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 rating Yes, are they compound wound Shunt with Auxiliary Poles
are they over compounded 5 per cent. ✓, if not compound wound state distance between each generator About 35'-0" max

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, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators In E.R. 2 port side 2 Star side
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
no woodwork and near, are the generators protected from mechanical injury and damage from water, steam or oil Yes

are their axes 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 In E.R. aft adjacent to bulkhead

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, non-ignitable 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 insulated from the slab with mica or micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework ✓

and is the frame effectively earthed Yes Are the fittings as per rule regarding:— 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

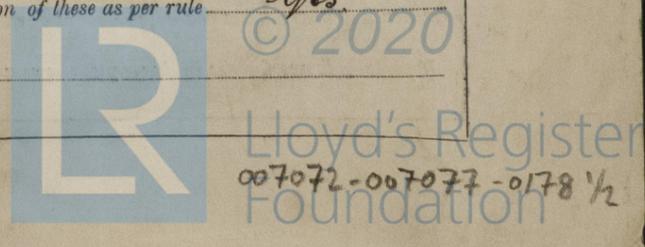
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches 1. Main Switch for each machine arranged to connect machines either to Power or to Light Circuit. Outgoing circuits have bi-polar switches

Instruments on main switchboard 13 ammeters 5 voltmeters 1 Switch 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 4. Tell Tals. lamps.

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

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



Cables: Single, twin, concentric, or multicore Single are the cables insulated and protected as per Tables IV or V of the Rules yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load About 5 volts

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets 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 None

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 Clipped under deck, Arrived
Run on steel sheet 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 VIII yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements Portable lamps used

Joints in Cables, state if any, and how made, insulated, and protected yes

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 Partitions, where armoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes. state the material of which the bushes are made Lignum vitae, brass

Earthing Connections, state what earthing connections are fitted and their respective sectional areas
are their connections made as per Rule yes

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 Situated on C. weather deck fore
in steel house

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

Secondary Batteries, are they constructed and fitted as per Rule 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. Lamps
in stoke hold have glass tight glasses, how are the cables led

where are the controlling switches situated yes

Searchlight Lamps, No. of 2, whether fixed or portable fixed, are their fittings as per Rule yes

Are Lamps, other than searchlight lamps, No. of none, are their live parts insulated from the frame or case yes, are their fittings as per Rule yes

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 wherever practicable
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 yes, if not of this type, state distance of the combustible material horizontally or vertically above the motors yes and yes

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted 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. yes
If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office yes

DESCRIPTION OF GENERATOR.	No of	RATED AT			DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.		Fuel Used.	Flash Point of Fuel.
MAIN	4	1000	110	2280	Turbo-Generator		
AUXILIARY		(250 EACH)		EACH.			
EMERGENCY	1	90	110	430	Diesel Engines	M.A.N. Type	Mex. DIESEL OIL
ROTARY TRANSFORMER							Above 150° F

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. mm/m ² .	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet. metric.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	3	603	403	1.04	1800	20	2 Layers Tape	Steel Tape
	MAIN RINGS	2	600	403	1.04	400	180	Layer of pure	Armour.
	EMERGENCY GENERATOR	1	600	403	1.04	100	6	white & black	
	EMERGENCY GENERATOR	SEE ABOVE						rubber 2 layers	
	ROTARY TRANSFORMER...	1	9	19	.813	10	1	oil covered tape	
	AUXILIARY SWITCHBOARDS							varnished	
	ENGINE ROOM	1	15.4	19	1.016	30	20		
	BOILER ROOM	1	15.4	19	1.016	30	80		
	ACCOMMODATION								
	Lighting Cond. No 4	2	200	133	1.3	115	52		Cables up to 141 mm section have lead covering and woven armour of galv. steel wire
	" No 3	2	1287	37	2.1	100	24		
	" No 15	2	101.8	37	1.9	81	14		
	26 other circuits in propulsion. See attached sheet.								Cables of larger sect have steel tape armour, cotton covering & jute woven into
	WIRELESS	2	12.4	19	0.9	30	40		
	SEARCHLIGHT	2	32.15	37	1	60	66		
	MASTHEAD LIGHT	1	2.14	1	1.65	5	170		
	SIDE LIGHTS	1	"	"	"	"	20		
	COMPASS LIGHTS	1	"	"	"	0.25	6		
	POOP LIGHTS								
	CARGO LIGHTS	1	"	"	"	10	10		
	ARC LAMPS								
	HEATERS								

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	1	200	133	1.3	230	50 m.		
	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	6 EACH	200	133	1.3	250	36 m.		
	WINCHES, AFT	4 EACH	200	133	1.3	250	36 m.		
	STEERING GEAR—								
	(a) MOTOR GENERATOR	Yes from ring							
	(b) MAIN MOTOR	2 EACH	400	427	1.09	370	130 m.	As for lighting	As for lighting
	WORKSHOP MOTOR	1 EACH	12.47	19	.9	40	40		
	VENTILATING FANS	13 "	32	37	1.1	80	40		
	THERMO TANK SYSTEM	35 "	32	37	1.1	75	40		
		7 "	22	37	.8	50	40		
		7 "	15	19	1	35	40		
	BOILER FANS	6 EACH	2x300	259	1.2	210	140		
		2 "	2x300	259	1.2	150	80		
	BOAT DAVIT MOTORS	10 "	32	37	1.1	45	26		

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.

OFFICINE ALLESTIMENTO E RIPARAZIONI NAVI

L. Mellini

Electrical Engineers.

Date 19. 1. 27.

COMPASSES.

Distance between electric generators or motors and standard compass About 90 m.

Distance between electric generators or motors and steering compass "

The nearest cables to the compasses are as follows:—

A cable carrying 1 Ampères 12 feet from standard compass 12 feet from steering compass.

A cable carrying .05 Ampères Entering feet from standard compass Entering 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 no degrees on any course in the case of the steering compass.

OFFICINE ALLESTIMENTO E RIPARAZIONI NAVI

L. Mellini

Builder's Signature.

Date 19. 1. 27.

Is this installation a duplicate of a previous case no. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The Electrical Installation)

has been fitted in accordance with the requirements of the Rules
approved plans. The materials and workmanship are good.
The vessel is eligible in my opinion to have the usual record in the
Register Book

It is submitted that this vessel is eligible for THE RECORD. Elec Light 27. 20/12

Total Capacity of Generators 1090 Kilowatts.

The amount of Fee ... £ 58 : 15 :
 Currency to be (£166.00)
 advised later.
 Travelling Expenses (if any) £15.00

When applied for, 19
 When received, 16. 9. 27

Y. R. Morrison
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned Elec Light

Im. 126.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

* See general instructions



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