

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 25 JUN 1928

Date of writing Report 8/6/1928 When handed in at Local Office 15/6/28. Port of GENOA.

No. in Survey held at GENOA. Date, First Survey 29/8/1927. Last Survey 7/6/1928

Reg. Book. 39800. on the T.S.S. "AUSONIA". (Number of Visits 22)

Built at SESTRI PONENTE. By whom built SOC. ANON. ANSALDO. Yard No. 283. When built 1928. Tons { Gross 13500 Net -

Owners SOC. ITALIANA DI SERVIZI MARITTIMI. Port belonging to GENOA.

Electric Light Installation fitted by OFFICINE ALESTIMENTO RIPARAZIONE NAVI. GENOA. Contract No. - When fitted 1928.

System of Distribution TWO WIRE SEPARATE.

Pressure of supply for Lighting 110. volts, Heating - 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 NO. SHUNT WOUND WITH AUXILIARY INTERPOLES. 9 FEET APPROX

are they over compounded 5 per cent. - YES, if not compound wound state distance between each generator - YES.

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 BETWEEN INTERMEDIATE SHAFT TUNNELS, AFT OF MAIN 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 - YES, 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 bed-plates 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 BETWEEN INTERMEDIATE SHAFT TUNNELS, AFT OF MAIN 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 - YES.

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 - YES.

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 - YES.

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 DOUBLE POLE FUSES

AND SWITCHES. CIRCUIT BREAKERS WITH OVERLOAD AND REVERSED CURRENT TRIPS TO

RULE REQUIREMENTS.

Instruments on main switchboard 7 ammeters 5 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 PUSHES AND LIGHTS ON SWITCHBOARD, OHMMETER FOR POWER CIRCUIT.

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 TWIN & MULTICORE 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 0 VOLTS LIGHTING, 0 VOLTS POWER

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 NO PAPER INSULATED CABLES USED

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 SUPPORTED IN GALVANISED IRON CLIPS. CABLES

STEEL BRAIDED THROUGHOUT INSTALLATION WITH EXCEPTION OF CABINS WHERE LEAD COVERED.

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 YES

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

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 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 IMPORTANT PARTS ARE EARTHED BY DIRECT METALLIC CONTACT (SWITCHBOARDS AND DYNAMO FRAMES). CONNECTIONS AT SWITCHBOARD FOR INDICATING EARTHS ARE OF 2 1/2"

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 CONTROLLING SWITCHES ON MAIN SWITCHBOARD AND ON EMERGENCY SWITCHBOARD. GENERATOR IS DRIVEN BY A SMALL DIESEL ENGINE AND IS SITUATED ON "A" DECK AMIDSHIPS

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 storerooms and engine rooms and wherever exposed to drip or condensed moisture, watertight YES

are any fittings placed in spaces where goods are liable to be stored 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 YES

how are the cables led YES

where are the controlling switches situated YES

Searchlight Lamps, No. of ONE, whether fixed or portable FIXED, are their fittings as per Rule YES

Arc Lamps, other than searchlight lamps, No. of YES, 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, laced 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 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

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	150 EACH	110	1365 EACH	3000	STEAM TURBINE	✓	✓
AUXILIARY	1	13	110	113	1900	DIESEL ENGINE	FUEL OIL	ABOVE 150° F
EMERGENCY	1	13	110	113	1900	DIESEL ENGINE	FUEL OIL	ABOVE 150° F
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	4	400	427	1.100	1365	120	FROM 300 M/M	FROM 300 M/M
	EQUALISER CONNECTIONS	✓	✓	✓	✓	✓	✓	UP COPPER	UP TWO
	AUXILIARY GENERATOR	✓	✓	✓	✓	✓	✓	TINNED PURE RUBBER WHITE AND BLACK	RIBBONS OF GALVANISED IRON AND IMPREGNATED
	EMERGENCY GENERATOR	1	60	19	2.000	113	50	RUBBER TAPE	JUTE
	ROTARY TRANSFORMER	✓	✓	✓	✓	✓	✓	TWO RUBBERED TAPES	TWO TAPES OF HESSIAN CLOTH IMPREGNATED
	AUXILIARY SWITCHBOARDS	3	200/105	37/7	2.66/110	243/84	31.90	RUBBER TAPE	JUTE
	ENGINE ROOM	2	14.90	19	1.00	30	175	TWO RUBBERED TAPES	
	BOILER ROOM	1	14.90	19	1.00	30	215	TWO TAPES	
	ACCOMMODATION								
	FORWARD CREW ETC	48	4.45	7	0.900	64	195	FROM 1 TO 150%	FROM 1 TO 150%
	1st CLASS HALL	46	4.45	7	0.900	64	286	COPPER TINNED PURE RUBBER	ABOVE LEAD IMPREGNATED
	DINING ROOMS (CABINS)	32	4.45	7	0.900	60	215	WHITE AND BLACK RUBBER TAPES	STEEL BRAID COVERED WITH PROTECTIVE VARNISH
	2nd & 3rd CLASS CABINS ETC	53	4.45	7	0.900	70	210	FROM 1 TO 150%	FROM 1 TO 150%
	AFT	53	4.45	7	0.900	70	210	COPPER TINNED PURE RUBBER	ABOVE LEAD IMPREGNATED
	NAVIGATION LIGHTS	2	4.45	7	0.900	5	410	WHITE AND BLACK RUBBER TAPES	STEEL BRAID COVERED WITH PROTECTIVE VARNISH
	WIRELESS	1	14.90	19	1.0	15	305	TWO RUBBERED TAPES	PROTECTIVE VARNISH
	SEARCHLIGHT	1	21.50	19	1.200	50	315	LEAD COVERED	
	MASTHEAD LIGHT	2	6.55	7	1.100	2.5	700	ALL CONDUCTORS	
	SIDE LIGHTS	2	4.45	7	0.90	1.5	310		
	COMPASS LIGHTS	6	1.131	1	1.20	1.0	875		
	POOP LIGHTS	1	4.45	7	0.90	0.5	505		
	CARGO LIGHTS	✓	✓	✓	✓	✓	✓		
	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	8	94.5	91	1.150	195	925	As Above	As Above
	WINCHES, AFT	8	94.5	91	1.150	195	925	As Above	As Above
	STEERING GEAR	✓	✓	✓	✓	✓	✓		
	(a) MOTOR GENERATOR	✓	✓	✓	✓	✓	✓		
	(b) MAIN MOTOR	✓	✓	✓	✓	✓	✓		
	WORKSHOP MOTOR	1	6.65	7	1.100	21	55		
	VENTILATING FANS	4	7.910	7	1.200	46	860		
	LIFTS	7	14.5.970	12/7	1.10.850	50/55	1150		
	LIFEBOAT MOTORS	2	38.80	19	1.60	90	135		
	SERVICE MOTORS	8	3.970/1.4	7/12	0.350/1.0	13.5/36	825		
	FOR KITCHENS ETC	4	14.20.8.3	19/19	1.0/1.80	50/90	455		
	" " " "	1	120.6	127	1.100	172	156		
	" " " "	1	131.8	127	1.150	181	145		
	" " " "	✓	✓	✓	✓	✓	✓		
	" " " "	✓	✓	✓	✓	✓	✓		

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

UFFICINE ALLESTIMENTO E RIPARAZIONI NA

ANSAALDO, Società Anonima  
STABILIMENTO MECCANICO  
SAMPIERDARENA

IL DIRETTORE

*Antonio G. Mellini* Electrical Engineers.

Date 12/6/28

COMPASSES.

Distance between electric generators or motors and standard compass 305 FEET.

Distance between electric generators or motors and steering compass 296 FEET.

The nearest cables to the compasses are as follows:—

A cable carrying 7 Amperes 14 feet from standard compass 17 feet from steering compass.

A cable carrying 1.7 Amperes 8 feet from standard compass 7 feet from steering compass.

A cable carrying 1.15 Amperes 6 feet from standard compass 6 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 S.E. course in the case of the standard compass and NIL degrees on S.E. course in the case of the steering compass.

ANSAALDO, Società Anonima  
STABILIMENTO MECCANICO  
SAMPIERDARENA

IL DIRETTORE

UFFICINE ALLESTIMENTO E RIPARAZIONI NA

*Antonio G. Mellini* Builder's Signature.

Date 12/6/28

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 installation has been built under Special Survey of tested materials and in accordance with the Secretary's letters, approved plans and Rule requirements.

The materials and workmanship are good and the installation when tried under full working conditions at sea was found satisfactory.

In my opinion the vessel is eligible for the notation "ELECTRIC LIGHT".

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

DUAL SURVEY  
L. R. & R. I.

Total Capacity of Generators 463 Kilowatts.

The amount of Fee ... Lr. 4100.0 When applied for, 15/8/28

Travelling Expenses (if any) Lr. 500.0 When received, 23.8.28

*G. Clark Vaux* Surveyor to Lloyd's Register of Shipping.  
*J. W. Leicester.*

FRI. 21 SEP 1928

Committee's Minute FRI 31 AUG 1928

Assigned

Im. 128.—Transfer. (The Surveys are requested not to write on or back on the space for Committee's Minute.)