

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 9 JAN 1929

Received at London Office

Date of writing Report 19 When handed in at Local Office 8 JAN 1929 Port of Newcastle-on-Tyne SUNDERLAND.

No. in Survey held at Sunderland. Date, First Survey 29th Oct. Last Survey 29th Nov 1928.
Reg. Book. Supp. 91581 on the T. S. S. "Paquita" (Number of Visits 10)

Tons { Gross 2618
Net 1149

Built at Sunderland. By whom built Sir J. Laing & Sons Ltd. Yard No. 704 When built 1928

Owners Suracaoische Scheepw. Maats. Port belonging to Willemstad

Electric Light Installation fitted by Sunderland Dunge & Long Co. Ltd. Contract No. 704. When fitted 1928.

System of Distribution DOUBLE 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 rating 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, is an adjustable regulating resistance fitted in series with each shunt field

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 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, 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 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

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 micanite 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 SWITCH &

FUSES FOR GENERATOR AND EACH OUTGOING CIRCUIT.

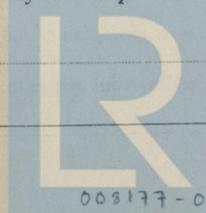
Instruments on main switchboard / ammeters / voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system EARTH LAMP SWITCH

& FUSE ON EACH POLE.

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.



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Cables: Single, twin, concentric, or multicore SINGLE & TWIN 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 4.6 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 _____

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 MAINS & MACHINERY SPACES: LEAD COVERED

ARMoured & BRAIDED CABLES SECURED WITH GALV IRON CLIPS. ACCOMM: LEAD COVERED & BRAIDED SECURED WITH BRASS CLIPS.
If cables are run in wood casings, are the casings and caps secured by screws _____, 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 VIII YES.

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

Joints in Cables, state if any, and how made, insulated, and protected NINE MADE.

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 _____

_____, 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 _____

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 _____

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 _____

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected SPECIAL CAST IRON.

PUMP ROOM FITTINGS.
IN GALV SCREWED IRON PIPE OUTSIDE PUMP ROOM.

where are the controlling switches situated OUTSIDE PUMP ROOM.

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 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 and fitted 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 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.
MAIN	1	8	110	72.7	380	SINGLE CYLINDER STEAM ENGINE	
AUXILIARY	—						
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 Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	.0600	19	.064	72.7	30	V.I.R.	LEAD COVERED ARMoured & BRAIDED.
	EQUALISER CONNECTIONS	—							
	AUXILIARY GENERATOR	—							
	EMERGENCY GENERATOR	—							
	ROTARY TRANSFORMER	—							
	AUXILIARY SWITCHBOARDS	—							
	ENGINE ROOM	2	.00701	4	.036	10.2	30	V.I.R.	LEAD COVERED ARMoured & BRAIDED.
	BOILER ROOM	2	.02214	7	.064	24.6	384	V.I.R.	LEAD COVERED ARMoured & BRAIDED.
	ACCOMMODATION FORWARD	2	.02214	7	.064	24.6	384	V.I.R.	LEAD COVERED ARMoured & BRAIDED.
	NAVIGATION	2	.01046	7	.044	7.2	460	V.I.R.	LEAD COVERED ARMoured & BRAIDED.
	WIRELESS	2	.02214	4	.064	23.6	176	V.I.R.	LEAD COVERED ARMoured & BRAIDED.
	SEARCHLIGHT	—							
	MASTHEAD LIGHT	2	.00194	3	.029	5.4	336	V.I.R.	LEAD COVERED ARMoured & BRAIDED.
	SIDE LIGHTS	2	.00194	3	.029	5.4	90	V.I.R.	LEAD COVERED & BRAIDED.
	COMPASS LIGHTS	2	.00194	3	.029	5.4	60	V.I.R.	LEAD COVERED & BRAIDED.
	POOP LIGHTS	2	.02214	7	.064	45.2	80	V.I.R.	LEAD COVERED ARMoured & BRAIDED.
	CARGO LIGHTS	2	.00194	2	.029	1.6	112	V.I.R.	LEAD COVERED & BRAIDED.
	ARC LAMPS	—							
	HEATER (GALLEY OIL)	2	.00299	3	.026	9.1	96	V.I.R.	LEAD COVERED, ARMoured & BRAIDED.

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current Ampères.	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								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR								
	WORKSHOP MOTOR								
	VENTILATING FANS								
	GALLEY BLOWER MOTOR	2	.00194	3	.029	4.5	80	V.I.R.	LEAD COVERED & ARMoured & BRAIDED.

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.

per pro. THE SUNDERLAND FORGE & ENG. CO. LTD. Electrical Engineers. Date 21.12.28.

H. Haffner

COMPASSES.

Distance between electric generators or motors and standard compass 220 FEET.

Distance between electric generators or motors and steering compass 210 FEET.

The nearest cables to the compasses are as follows:—

A cable carrying 7.2 Ampères 20 feet from standard compass 12 feet from steering compass.

A cable carrying 1.8 Ampères 10 feet from standard compass LED INTO feet from steering compass.

A cable carrying 1.8 Ampères LED INTO feet from standard compass 10 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 *all* course in the case of the standard

compass, and *nil* degrees on *all* course in the case of the steering compass.

AIR JAMES LAING & SONS, LIMITED,

Hugh Cairns
 Director

Builder's Signature.

Date 28th Dec. 1928.

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 above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation elec light wireless

Total Capacity of Generators 8 Kilowatts.

The amount of Fee ... £ 8 : : When applied for, 28 Nov. 19. 28

Travelling Expenses (if any) £ : : When received, 30 Nov. 19. 28 *Nil*

W. T. Badger
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Im. 2, 28. — Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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