

Rpt. 13.

No. 47675

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 29.8. 1928 When handed in at Local Office 19.3. 1928 Port of GLASGOW.

No. in Survey held at GLASGOW. Date, First Survey 1.2.28 Last Survey 20.2. 1928 (Number of Visits 3)

Reg. Book. 42321. on the M.V. PONZANO Tons { Gross 1346 Net

Built at GOVAN. By whom built HARLAND & WOLFF LTD Yard No. 445 When built 1928

Owners MESSRS MACANDREW & CO LTD Port belonging to LIVERPOOL.

Electric Light Installation fitted by MESSRS HARLAND & WOLFF LTD Contract No. 445 When fitted 1928

System of Distribution Two Wire volts, Heating 200 volts, Power 200 volts.

Pressure of supply for Lighting 220 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 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

Position of Generators Port side Eng room No 203 Starboard side of Eng room Yes

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

and 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 On platform over Thrust Recess aft end of 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

are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and 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

connections of switches Yes

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches D.P. Circuit Breakers interlocked with S.P. Switch for Equalizing for each Generator

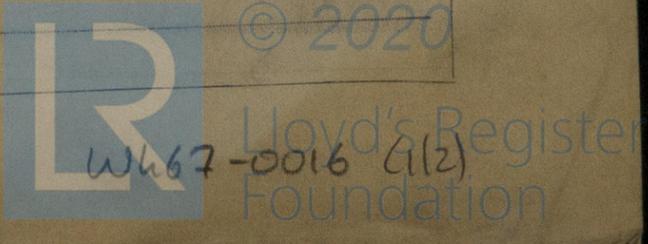
7 S.P. Switch & D.P. Fuse for each outgoing circuit

Instruments on main switchboard 3 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 Two lamps & 2 linked S.P. switches across mains, mid point of lamps earthed.

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 Both 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 7-2

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 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 S. I. cables clipped to Bulkhead in accom. Run in S. I. casing in cargo space & clipped to perforated plating in Eng. Room

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 In a special joint Box.

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 Yes, 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 Yes

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 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 1, whether fixed or portable 1, are their fittings as per Rule Yes

Arc Lamps, other than searchlight lamps, No. of 1, 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 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.	Amps.	Revs. per Min.	Fuel Used.	Flash Point of Fuel.		
MAIN	3	65	220	295	300	Diesel Oil Engine	British Mex.	CLOSED 176°	
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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2 pole	.15	37	.072	295	25 pole	Rubber	Lead based
	EQUALISER CONNECTIONS	1 pole	.15	37	.072	—	62 1/2	Do.	Do.
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	1/2 pole	.0225	7	.064	50	20	Rubber	Lead based
	BOILER ROOM								
	ACCOMMODATION	1/2 pole	.01	7	.064	43	40	Rubber	Lead based
	COOKING & BAKING	" "	.075	19	.072	88	40	Do.	Do.
	WIRELESS	1/2 pole	.003	3	.036	11	25	Rubber	Lead based
	SEARCHLIGHT	1 pole	.003	3	.036	46	270	Rubber	Lead based
	MASTHEAD LIGHT	1/2 pole	.002	3	.029	46	40	Do.	Do.
	SIDE LIGHTS	" "	.002	3	.029	15	20	Do.	Do.
	COMPASS LIGHTS	" "	.002	3	.029	15	20	Do.	Do.
	POOP LIGHTS	" "	.002	3	.029	15	56	Do.	Do.
	CARGO LIGHTS	" "	.002	3	.029	18	60	Do.	Do.
	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	1	.0225	7	.064	40	50	Rubber	Lead based
	MAIN BILGE LINE PUMPS	1	.007	7	.036	22	15	Do.	Do.
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS	1	.0225	7	.064	40	65	Rubber	Lead based
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR	1	.0225	7	.064	40	50	Rubber	Lead based
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	2	.0145	7	.052	31.5 each	25 each	Rubber	Lead based
	OIL FUEL TRANSFER PUMP								
	WINDLASS	1	.018	19	.072	12.5	120	Rubber	Lead based
	WINCHES, FORWARD	2	.075	19	.072	10 each	30 each	Do.	Do.
	WINCHES, AFT	2	.075	19	.072	10.8	50	Do.	Do.
	STEERING GEAR								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR	1	.04	19	.052	45	200	Rubber	Lead based
	WORKSHOP MOTOR								
	VENTILATING FANS								
	HOT SALT WATER PUMP	1	.003	3	.036	10	35	Rubber	Lead based
	FUEL OIL PUMP	1	.0045	7	.029	17	10	Do.	Do.
	" - PURIFIER	1	.003	3	.036	10.8	50	Do.	Do.
	LUB - "	1	.003	3	.036	10.8	20	Do.	Do.
	LATHE	1	.003	3	.036	9	20	Do.	Do.
	DRILL	1	.003	3	.036	9	40	Do.	Do.
	GALLEY BLOWER	1	.003	3	.036	4.75	40	Do.	Do.
	REFRIG M/C	1	.003	3	.036	4.75	30	Do.	Do.

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.

For HARLAND AND WOLFF, LIMITED.

John Dickenson
Managing Director, Electrical Engineers.

Date 12th March 1928

COMPASSES.

Distance between electric generators or motors and standard compass 50 ft.

Distance between electric generators or motors and steering compass 54 ft.

The nearest cables to the compasses are as follows:—

A cable carrying .6 Ampères 2 feet from standard compass 6 feet from steering compass.

A cable carrying 2.0 Ampères 5 feet from standard compass 6 feet from steering compass.

A cable carrying 5.0 Ampères 5 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 *all the* course in the case of the standard compass, and *Nil* degrees on *all the* course in the case of the steering compass.

HARLAND AND WOLFF, LIMITED.

John Dickenson
Managing Director, Builder's Signature.

Date 12th March 1928

Is this installation a duplicate of a previous case *Yes*. If so, state name of vessel *M.V. Pacheco*.

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 and found satisfactory. The materials & workmanship was found to be good and sound.*

this vessel is eligible for
Blue Light
SA.

16/11/28

Total Capacity of Generators *195* Kilowatts.

The amount of Fee ... £ *36.5.0* : *When applied for, 1/3/28*

Travelling Expenses (if any) £ : *When received, 16/3/28*

J. S. Rankin
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 20 MAR 1928*

Assigned *Elec. Light.*

A.B.
19/3/28

Im. 1.27.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

