

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 19 When handed in at Local Office 5/11/1927 Port of Newcastle-on-Tyne Received at London Office 8 NOV 1927

No. in Survey held at Newcastle Date, First Survey Sept. 21 Last Survey Oct. 24 1927.  
Reg. Book. Suff. (Number of Visits 4)

42277 on the S. S. Perija Tons <sup>Gross</sup>            <sub>Net</sub>           

Built at Newcastle By whom built Palmer & Co Yard No. 976 When built 1927

Owners Venezuelan Gulf Oil Co Port belonging to Maracaibo

Electric Light Installation fitted by Palmer & Co Contract No. 976 When fitted 1927

System of Distribution Double wire

Pressure of supply for Lighting 110 volts, Heating            volts, Power            volts.

Direct or Alternating Current, Lighting Direct Power           

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 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 Engine room starboard 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            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 Engine room starboard side

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 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 on each outgoing circuit on dynamo mains

Instruments on main switchboard one ammeters one 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 coupled to earth through switches & fuses

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 4.7 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 Yes

**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 & braided cables supported by iron clips. Main cables carried in pipes along expansion trunk  
 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 None 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 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 None fitted

**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 None fitted

**Fittings,** are all fittings on weather decks, in storerooms and engine rooms and where 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 in pump room fittings protected by stout glass bowl. ✓  
in gaslight pipes wholly outside the pump room ✓  
 where are the controlling switches situated outside pump room entrance ✓

**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 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 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.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	12	110	109	360	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 Am. Amps.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	.1168	37	.064	109	73	V. I. R.	Lead covered, arm & braided
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.00455	7	.029	4.29	130	bo	Lead covered & braided
	BOLLER ROOM								
	ACCOMMODATION Aft.	2	.01462	7	.052	32.96	96	bo	bo
	bo midship	2	.06	19	.064	28.3	490	bo	bo
	navigation	2	.00701	7	.036	6.0	520	bo	bo
	WIRELESS	2	.01462	7	.052	13.5	590	bo	bo
	SEARCHLIGHT	2	.00299	3	.036	5.0	90	bo	bo
	MASTHEAD LIGHT	2	.00299	3	.036	1.9	380	bo	bo
	SIDE LIGHTS	2	.00194	3	.029	1.9	114	bo	bo
	COMPASS LIGHTS	2	.00194	3	.029	1.25	56	bo	bo
	DECK LIGHTS	2	.00299	3	.036	1.9	580	bo	bo
	CARGO LIGHTS	2	.008	70	.0076	3.0	30	bo	Spacially arm & braided
	ARC LAMPS	2							
	HEATERS								

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current Am. Amps.	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								
	STEELING GEAR								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR								
	WORKSHOP MOTOR								
	VENTILATING FANS								

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.

*W. A. Pomeroy* Electrical Engineers. Date *3/11/27*  
*Palmer's S. & F. Co. Ltd*

COMPASSES.

Distance between electric generators or motors and standard compass *120 feet*  
 Distance between electric generators or motors and steering compass *110 feet.*  
 The nearest cables to the compasses are as follows:—  
 A cable carrying *.25* Amperes *on the* ~~feet from~~ standard compass *8* feet from steering compass.  
 A cable carrying *.25* Amperes *8* feet from standard compass *on the* ~~feet from~~ steering compass.  
 A cable carrying \_\_\_\_\_ Amperes \_\_\_\_\_ 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 \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the standard compass, and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

*Palmer's S. & F. Co. Ltd.*

*Ab Jenkins* Builder's Signature. Date *3/11/27*

Is this installation a duplicate of a previous case *yes.* If so, state name of vessel *Aragna.*

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*

*It is submitted that this vessel is eligible for THE RECORD. Elec light*  
*W.T.B.*  
*18/11/27*

Total Capacity of Generators *12* Kilowatts.

The amount of Fee ... £ *12 : 0* : *27/10/27*  
 Travelling Expenses (if any) £ : : *2/11/27*

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

Committee's Minute \_\_\_\_\_

Assigned *Elec Lt*

Im 1.26.—Transfer. (The Surveys are requested not to write on or below the space for Committee's Minute.)



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