

As seen

23 AUG 1927

Rpt. 13.

No. 81713

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 19 When handed in at Local Office 27 AUG 1927 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle. Date, First Survey 25 Nov. 26 Last Survey 4 Aug 1927
Reg. Book. (Number of Visits 42)

31566 on the M.V. Patella Tons { Gross Net

Built at Newcastle. By whom built Palmers & Co. Yard No. 986 When built 1927.

Owners Anglo Saxon Petroleum Co. Ltd Port belonging to London

Electric Light Installation fitted by Palmers & Co. (Lighting) Contract No. 986. When fitted 1927.
J. Holmes & Co. (Power).

System of Distribution Two wire system

Pressure of supply for Lighting 110 volts, Heating — 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 overload 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 and clearly marked Yes, are they so spaced or shielded that they cannot be accidentally earthed, or short circuited Yes Are the lubricating arrangements of the generators as per Rule Yes.

Position of Generators Starboard side of 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 — and —, are the generators protected from mechanical injury and damage from water, steam or oil Yes

are their axis 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 Starboard side 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 — and —

are they constructed wholly of durable, incombustible 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 connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework Yes, and is the frame effectively earthed Yes

Are the following fittings as per Rule, viz.: — 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.

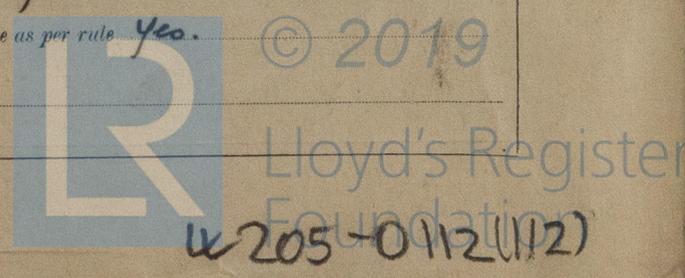
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches 150 Amp D.P.C.B for each generator interlocked with equalised switch fitted with overload, reverse trip + time lag. 50 Amp D.P.S. fuses on each outgoing circuit

Instruments on main switchboard 2 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 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

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



Insulation of Cables, state type of cables, single or twin single are the cables insulated and protected as per Tables III or IV of the Rules yes.

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 4.6 volt lighting, 6 volts on power

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 square inch and above provided with soldering socket 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 All main cables lead covered & armoured carried along fore & aft gangway in pipes.

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 VI 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 Positions, 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 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, are separate screens provided for the use of oil and electric side lights yes

are separate oil lanterns provided for the mast head lights and side lights 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 fitted with glass shades & heavy metal guards.

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

protected by stout glass bowl opened only from outside. how are the cables led in galvanised iron pipe wholly outside

where are the controlling switches situated in accⁿ passage starboard side.

Searchlight Lamps, No. of 1, whether fixed or portable yes, are their fittings as per Rule yes

Are 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 axis 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

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed 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

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

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PARTICULARS OF GENERATING PLANT.

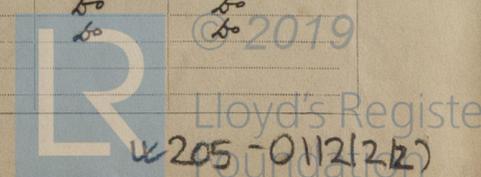
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	32	110	291/266	-	Oil engines		
AUXILIARY	2	14	110	127	-	One by oil engine + one by steam engine.		
EMERGENCY								
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	.4985	61	.103	291	118	V. I. R.	Lead cov & arm'd
	AUXILIARY GENERATOR	2	.1168	37	.064	127	38	do	do
	ROTARY TRANSFORMER	2	.1168	37	.064	127	118	do	do
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM	2	.01462	7	.052	30.5	30	do	do
	Acc ⁿ midships	2	.06	19	.064	35.9	600	do	do
	do + poop	2	.0396	19	.052	35.4	156	do	do
	hangarion	2	.01462	7	.052	6.3	690	do	do
	Ironcastle	2	.02214	7	.064	8.27	1100	do	do
	Deck portables	2	.0396	19	.052	29.8	120	do	do
	WIRELESS	2	.00701	7	.036	13.5	300	do	do
	SEARCHLIGHT	2	.00194	3	.029	.9	810	do	lead covered
	MASTHEAD LIGHT	2	.00194	3	.029	.9	686	do	do
	SIDE LIGHTS	2	.00194	3	.029	.9	168	do	do
	COMPASS LIGHTS	2	.00194	3	.029	.25	50	do	do
	STERN LIGHTS	2	.00299	3	.036	.9	840	do	Lead cov & arm'd
	CARGO LIGHTS	2	.003	70	.0076	3.0	50	do	Spacially arm'd & braided
	DECK LAMPS	2	.00194	3	.029	.9	60	do	lead covered.
	HEATERS								

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	1	.1478	37	.072	109	260	V. I. R.	Lead cov & arm'd
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	1	.1478	37	.072	146	40	do	do
	OIL FUEL TRANSFER PUMP	2	.06	19	.064	70	176	do	do
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR	2	.3024	37	.103	227	360	do	do
	WORKSHOP MOTOR								
	VENTILATING FANS								
	Refrigerator	1	.1009	19	.083	90	384	do	do
	Cooling Water pumps	2	.1964	37	.083	350	220	do	do
	Workshop emergency	1	.00701	7	.036	18.0	30	do	do
	do drilling	1	.02214	7	.064	26.0	40	do	do
	do lathe	1	.01462	7	.052	26.0	30	do	do
	Oil Purifier	2	.01462	7	.052	23.8	84	do	do
	Vent Fan motor	2	.01462	7	.052	26.0	36	do	do
	Fuel oil purifier	1	.00299	3	.036	8.0	100	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 Power system *J. Holmes* Electrical Engineers. Date *Aug 23. 1927.*
 For Lighting system *W. Homroy*

COMPASSES.

Palmer's S & J Co. 24/8/27
 Distance between electric generators or motors and standard compass *210 feet.*
 Distance between electric generators or motors and steering compass *206 feet.*
 The nearest cables to the compasses are as follows:—
 A cable carrying *.25* Amperes *on the feet from* standard compass *10* feet from steering compass.
 A cable carrying *.25* Amperes *7* 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.

PALMERS SHIPBUILDING & IRON WORKS

D.R. Macdonald

Builder's Signature.

Date

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

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, unless

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

W.T. Badger 9/9/27

Total Capacity of Generators *124* Kilowatts

The amount of Fee ... £ *32:14* : *24/8/27* When applied for, *19.27*

Travelling Expenses (if any) £ : : *30.8.27* When received, *19.*

Committee's Minute

Assigned

Elec Dept

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

Im. 124.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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