

Rpt. 18.

No. 85398.

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

12 MAR 1930

Date of writing Report 19 When handed in at Local Office 8/3/30 Port of Newcastle-on-Tyne

No. in Survey held at Newcastle. Date, First Survey 19 Dec/29 Last Survey 13 Feb 1930  
Reg. Book. Supp. 41162 on the S. M.V. "Luxcot" (Number of Visits 7)

Built at Newcastle. By whom built Palmers Ltd. Yard No. 994 When built 1930  
Owners H. E. Moss & Co. Bankers Ltd. Port belonging to Liverpool.  
Electric Light Installation fitted by Palmers Ltd. Contract No. 994 When fitted 1930  
Is the Vessel fitted for carrying Petroleum in bulk Yes.

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 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 Engine room aft  
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 port 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 micanite 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, 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 change over switch fuses on dynamo mains. Double pole switch fuses on 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 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 stator* 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 *5 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 stator cables supported by galvanised iron clips. Main cables carried along fore shaft gangways 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 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 *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, in pump room entrance protected by stout glass bowl only to be opened from the outside, operated by D.P. switches, how are the cables led in galvanised iron pipe completely outside*  
 where are the controlling switches situated *in passage starboard midship area*

**Searchlight Lamps,** No. of *Yes*, whether fixed or portable *Yes*, 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 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	15	110	137	350	Single cylinder steam engine		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	.1478	37	.072	137	152	72	V.I.R.	Lead cov'd stator
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER (MOTOR GENERATOR)									
ENGINE ROOM	1	.06	19	.064	50.2	83	36	50	50
BOILER ROOM	1	.06	19	.064	50.2	83	36	50	50
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
Midships	1	.06	19	.064	40	83	540	50	50
Forward	1	.02214	7	.064	11.7	46	900	50	50
WIRELESS	1	.02214	7	.064	2.27	46	660	50	50
SEARCHLIGHT	FORWARD	.00194	3	.029	.37	7.8	273	50	50
	AFTER	.00194	3	.029	.37	7.8	291	50	50
	PORT	.00194	3	.029	.37	7.8	66	50	Lead covered twin
	STARBOARD	.00194	3	.029	.37	7.8	72	50	50
COMPASS LIGHTS	1	.00194	3	.029	.28	7.8	25	50	50
STERN LIGHTS	1	.00194	3	.029	.37	7.8	420	50	Lead cov'd stator
CARGO LIGHTS	1	.0018	16	.012	3.27	4.2	80	50	Cab tyre flexible
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
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	1	1	.00701	7	.036	17.4	24.0	126	V. I. R.	Lead cov'd stator
VENTILATING FANS										
Oil Purifier motor	3	1	.00701	7	.036	22.0	24.0	120	50	50

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. H. Pomeoy



Electrical Engineers.

Date 4/3/30

COMPASSES.

Distance between electric generators or motors and standard compass 240 feet  
 Distance between electric generators or motors and steering compass 225 feet.

The nearest cables to the compasses are as follows:—

A cable carrying .28 Ampères on the ~~port~~ standard compass 8 feet from steering compass.  
 A cable carrying .28 Ampères 8 feet from standard compass ~~on the starboard~~ steering compass.  
 A cable carrying Ampères 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 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.

PALMERS SHIPBUILDING & IRON Co., Ltd.

G. S. Williamson

Builder's Signature.

Date 4/3/30

SHIPYARD MANAGER.

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

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. Badger  
 17/3/30

Total Capacity of Generators 30 Kilowatts.

The amount of Fee ... £ 22:10  
 Travelling Expenses (if any) £ : :  
 When applied for, 25.2.19.30  
 When received, 3.3.19.30

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec. Lt.

Im. 12, 28.—Transfer. (The Surveyors are requested not to make on or below the space for Committee's Minute.)



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