

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 1 SEP 1926

Date of writing Report 1-6-26 When handed in at Local Office 30-8-1926 Port of GLASGOW.

No. in Surrey held at GREENOCK Date, First Survey 4<sup>th</sup> May Last Survey 3<sup>rd</sup> June 1926  
Reg. Book. (Number of Visits... 4)

40089 on the S.S. "MARSLEW"  
Tons { Gross 4572  
Net 2881

Built at PORT GLASGOW. By whom built LITHGOW'S LTD Yard No. 780 When built 1926.

Owners THE WALMAR S.S. CO LTD Port belonging to LONDON.

Electric Light Installation fitted by MESSRS W. BENNETT & CO Contract No. 780 When fitted 1926.

System of Distribution Two wire D.C. ✓  
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 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 \_\_\_\_\_, is an adjustable regulating resistance fitted in series with each shunt field \_\_\_\_\_

Are all terminals accessible and clearly marked Yes, are they so spaced or shielded that they cannot be accidentally earthed, or short circuited \_\_\_\_\_

Position of Generators Main Platform Engine Room ✓, are they clear of all inflammable material Yes ✓

is the ventilation in way of the generators satisfactory 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 \_\_\_\_\_

Main Switch Boards, where placed on Bulkhead near Dynamo.

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 Yes ✓

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 \_\_\_\_\_, and is the insulated from the slab with mica or micanite and the slab similarly insulated from its framework \_\_\_\_\_

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 no fuses ✓, proportion of omnibus bars Insulated ✓, 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 1 main switch

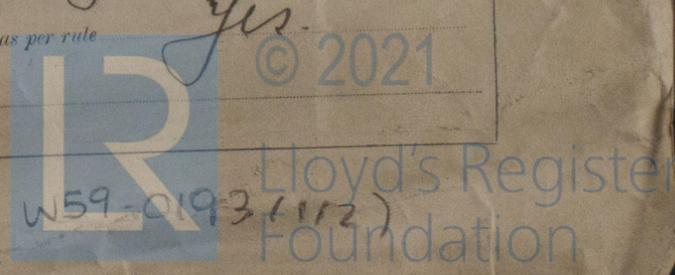
100 amp fuse 100 amps with 6 sub switches & fuses of 25 ampere capacity each

Instruments on main switchboard one ammeter, one voltmeter, \_\_\_\_\_ 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 earth lamps are supplied.

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 Twins 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 Not 2.5 Volts

**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 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 Wire armour & clipped to under side of deck.

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

**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 Earth Bonding clips + 4/18 cable, 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, 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 None, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected None, how are the cables led None

where are the controlling switches situated None

**Searchlight Lamps**, No. of None, whether fixed or portable None, are their fittings as per Rule None

**Arc Lamps**, other than searchlight lamps, No. of None, are their live parts insulated from the frame or case None, are their fittings as per Rule None

**Motors**, are their working parts readily accessible None, are the coils self-contained and readily removable for replacement None, are the brushes, brush holders, terminals and lubricating arrangements as per Rule None, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material None, are they protected from mechanical injury and damage from water, steam or oil None, are their axis of rotation fore and aft None, 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 None, if not of this type, state distance of the combustible material horizontally or vertically above the motors None and None

**Control Gear and Resistances**, are the generator field and motor speed regulators, starters and controllers constructed as per Rule None

**Lightning Conductors**, where lightning conductors are required, are these fitted as per Rule None

**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	...	8	110	73.	350.	Vertical 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	483	24	V.I.R. Braided Iron Tubing	
	AUXILIARY GENERATOR	1	—	—	—	—	—	—	—
	EMERGENCY GENERATOR	1	—	—	—	—	—	—	—
	ROTARY TRANSFORMER...	1	—	—	—	—	—	—	—
	AUXILIARY SWITCHBOARDS	2	.0020	3	.029	3.0	200.0	V.I.R. Lead	Covered
	ENGINE ROOM	2	.0020	3	.029	3.0	100.0	do	do
	BOILER ROOM	2	.0040	4	.036	6.0	300	V.I.R. Lead	Covered
	Forecastle Saloon	2	.0040	4	.036	11.0	200	do	do
	Navigation	2	.0040	4	.036	11.0	200	do	do
	Midships	2	.0040	4	.036	11.0	100	do	do
	Wireless	2	.0040	4	.036	5.0	200	do	do
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	.0020	3	.029	.5	60	V.I.R. Lead	Covered
	SIDE LIGHTS...	2	.0020	3	.029	.5	30	do	do
	COMPASS LIGHTS	2	.0020	3	.029	.5	300	V.I.R. Lead	Covered
	POOP LIGHTS	2	.0020	3	.029	.5	300	V.I.R. Lead	Covered
	CARGO LIGHTS	2	.0020	3	.029	.5	300	V.I.R. Lead	Covered
	ARC LAMPS								
	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								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	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.

*Walter Bennett Ltd*  
*Walter Bennett Director* Electrical Engineers.

Date *28th August 1926*

COMPASSES.

Distance between electric generators or motors and standard compass *approx. 200ft*

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying *5* Amperes *1* feet from standard compass *1* feet from steering compass.

A cable carrying *5* Amperes *3* feet from standard compass *3* 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.

LITHGOWS LIMITED.

*W J Allan*

Director & Secretary

Builder's Signature.

Date

*28 Aug / 26*

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. *This installation has*)

*been fitted on board under special survey. Tested under full working conditions and found satisfactory. The workmanship was found to be good and sound.*

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

*JWD*  
*1/9/26*

Total Capacity of Generators *8* Kilowatts

The amount of Fee ... .. £ *50.00* When applied for, *CPK*

Travelling Expenses (if any) £ *10/6* When received, *28/6/26*

*J Shanker*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 31 AUG 1926*

Assigned *Elec Light* *WJW*

*26*  
*30/8/26*

Im. 24.—Transfer. (The Surveys are requested not to write on or below the space of the Committee's Minute.)



© 2021

Lloyd's Register Foundation