

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 19575

Port of Sunderland Date of First Survey Date of Last Survey 21st Feb 99 No. of Visits
 No. in Reg. Book on the Iron or Steel S/S Ville de Tamatave Port belonging to Harro
 Built at Sunderland By whom Sir J. Laing & Sons When built 1899
 Owners Comp. Havraise Pen de Nav à Vap Owners' Address Harro
 Yard No. 504 Electric Light Installation fitted by Sunderland Forge & Eng. Co. When fitted 1899

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 pole "Pallion" dynamo coupled to 7x6 open vertical engine

Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed in Engine Room

Position of Main Switch Board close to dynamo having switches to groups 6 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each
Each light a switch.

If cut outs are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch board to the cables of auxiliary circuits yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes

If vessel is wired on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 25 per cent over the normal current

Are all cut outs fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used

are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit Engineer instructed.

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 88 arranged in the following groups :-

A	<u>Foremast</u>	<u>11</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>6.6</u>	Amperes
B	<u>Engineers</u>	<u>13</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>7.8</u>	Amperes
C	<u>Engine Room</u>	<u>22</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>13.2</u>	Amperes
D	<u>Saloon</u>	<u>26</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>15.6</u>	Amperes
E	<u>Cargo</u>	<u>16</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>9.6</u>	Amperes
	<u>2 Mast head light with 1 lamp</u>		each of	<u>32</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
	<u>2 Side light with 1 lamp</u>		each of	<u>32</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
	<u>4 clusters Cargo lights of 4-32cp each</u>				candle power , whether incandescent or arc lights		

If arc lights, what protection is provided against fire, sparks, &c. No arcs, except search light.

Where are the switches controlling the masthead and side lights placed

DESCRIPTION OF CABLES.

Main cable carrying 75 Amperes, comprised of 37 wires, each 16 L.S.G. diameter, .12 square inches total sectional area

Branch cables carrying 45 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .061 square inches total sectional area

Branch cables carrying 25 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .035 square inches total sectional area

Leads to lamps carrying .6 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .003 square inches total sectional area

Cargo light cables carrying 48 Amperes, comprised of 130 wires, each 38 L.S.G. diameter, .004 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised Rubber insulation on cables, taping, braided and compounded.

Joints in cables, how made, insulated, and protected Spliced, soldered, covered with pure rubber tape, solution, Blackly tape, & Compound.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage yes.

Are there any joints in or branches from the cable leading from dynamo to main switch board no

How are the cables led through the ship, and how protected Iron pipes throughout ship hold.



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible yes.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture

none exposed to weather.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat iron pipes.

What special protection has been provided for the cables near boiler casings iron pipes.

What special protection has been provided for the cables in engine room iron pipes.

How are cables carried through beams in vulcanized fibre frames through bulkheads, &c. watertight glands

How are cables carried through decks in watertight insulating duct tubes.

Are any cables run through coal bunkers yes or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected in iron pipes.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage no

If so, how are the lamp fittings and cable terminals specially protected

Where are the main switches and cut outs for these lights fitted

If in the spaces, how are they specially protected

Are any switches or cut outs fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel to hull

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, cut outs, or joints of cables fitted in the pump room or companion

How are the lamps specially protected in places liable to the accumulation of vapour or gas

The installation is supplied with a voltmeter and an amperemeter, fixed

The installation is supplied with a voltmeter and an amperemeter, fixed in engine room

The copper used is guaranteed to have a conductivity of 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2000 megohms per statute mile after 24 hours' immersion in seawater.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

p. pro THE SUNDERLAND FORGE & ENGINEERING Co., Ltd.

W. K. Sander

Electrical Engineers

Date Mar 8 99

COMPASSES.

Distance between dynamo or electric motors and standard compass 68 ft approx

Distance between dynamo or electric motors and steering compass 74 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.6</u>	Amperes	<u>8</u>	feet from standard compass	<u>14</u>	feet from steering compass
A cable carrying		Amperes		feet from standard compass		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

The maximum deviation due to electric currents, etc., was found to be none degrees on course in the case of the standard compass and none degrees on course in the case of the steering compass.

Sir James Laing & Co., Ltd.

Richard Walker

Builder's Signature.

Date 13. 3. 99.

GENERAL REMARKS.

This installation as far as can be seen appears to be in accordance with the requirements of the Rules.

Pat R Salmon

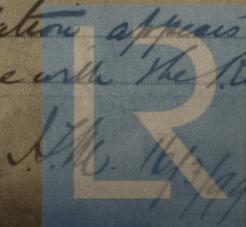
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

This installation appears to be fitted in accordance with the Rules.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 15.



Lloyd's Register Foundation