

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 25608

Port of SUNDERLAND. Date of First Survey 17 Feb Date of Last Survey 25 Feb 13 No. of Visits 4
 No. in Reg. Book on the Iron or Steel S.S. "Sharon" Port belonging to Newport Mon.
 Built at SUNDERLAND. By whom John Brown & Sons Ltd When built 1913
 Owners Pardoe Thomas & Co Ltd Owners' Address Newport Mon
 Yard No. 147 Electric Light Installation fitted by Sunderland Forge & Eng. Co. Ltd. When fitted 1913

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Multipolar Compound wound dynamo direct coupled to open type inverted Engine both by Sunderland Forge & Eng. Co. Ltd.
 Capacity of Dynamo 80 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Bottom of Engine room Starbd. Whether single or double wire system is used Double
 Position of Main Switch Board Close to dynamo having switches to groups Two of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1 in Chart room having switches to Foremast, Mainmast, Port and Starboard.

If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits Yes

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 100% per cent over the normal current

Are all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions No 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 Yes.

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes.

Total number of lights provided for 85 arranged in the following groups:—

A	<u>62</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>34.72</u>	Amperes
B	<u>23</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>12.88</u>	Amperes
C		lights each of		candle power requiring a total current of		Amperes
D		lights each of		candle power requiring a total current of		Amperes
E		lights each of		candle power requiring a total current of		Amperes
<u>2</u>	Mast head light with	<u>1</u>	lamps each of <u>32 c.p.D.F.</u>	candle power requiring a total current of	<u>2.42</u>	Amperes
<u>2</u>	Side light with	<u>1</u>	lamps each of <u>32 c.p.D.F.</u>	candle power requiring a total current of	<u>2.42</u>	Amperes
<u>4</u>	Cargo lights of	<u>6 x 16</u>		candle power, whether incandescent or arc lights	<u>Incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed In chartroom.

DESCRIPTION OF CABLES.

Main cable carrying	<u>47.6</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>16</u>	S.W.G. diameter, <u>.060</u>	square inches total sectional area
Branch cables carrying	<u>34.72</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>16</u>	S.W.G. diameter, <u>.022</u>	square inches total sectional area
Branch cables carrying	<u>12.88</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>20</u>	S.W.G. diameter, <u>.0070</u>	square inches total sectional area
Leads to lamps carrying	<u>2.24</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>18</u>	S.W.G. diameter, <u>.0012</u>	square inches total sectional area
Cargo light cables carrying	<u>3.36</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>16</u>	S.W.G. diameter, <u>.0032</u>	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

In berths etc., pure rubber Vulcanised lead covered.

Engine room etc., Armoured and braided.

Main Cables. V.I.R. in iron pipes.

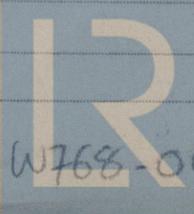
Joints in cables, how made, insulated, and protected

There are none.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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

Are there any joints in or branches from the cable leading from dynamo to main switch board

How are the cables led through the ship, and how protected V.I.R. in iron pipe.



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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 Armoured and braided.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Armoured and braided.

What special protection has been provided for the cables near boiler casings Armoured and braided.

What special protection has been provided for the cables in engine room Armoured and braided.

How are cables carried through beams Holes bushed fibre through bulkheads, &c. W.T. Glands

How are cables carried through decks W.T. Iron deck tubes.

Are any cables run through coal bunkers Yes or cargo spaces No or spaces which may be used for carrying cargo, stores, or baggage No

If so, how are they protected V.I.R. in iron pipe.

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 No

Where are the main switches and fuses for these lights fitted No

If in the spaces, how are they specially protected No

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed No

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel No

How are the returns from the lamps connected to the hull No

Are all the joints with the hull in accessible positions No

Is the installation supplied with a voltmeter Yes, and with an amperemeter No, fixed on Switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas No

Are any switches, fuses, or joints of cables fitted in the pump room or companion No

How are the lamps specially protected in places liable to the accumulation of vapour or gas No

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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.

Electrical Engineers Date 27/2/13.

COMPASSES.

Distance between dynamo or electric motors and standard compass About 56 feet.

Distance between dynamo or electric motors and steering compass About 50 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>1.21</u>	Amperes	<u>about 4</u>	feet from standard compass	<u>about 5</u>	feet from steering compass
A cable carrying	<u>1.21</u>	Amperes	<u>" 4</u>	feet from standard compass	<u>" 5</u>	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 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.

M. Hambleton Builder's Signature. Date 7 March 1913

GENERAL REMARKS. The installation has been fitted under special survey tested under full working conditions and found satisfactory

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

J.W.D. 12/3/13. *Hewish Davis* Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



506 & 12—Transfer.