

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 11784

Port of **WEST HARTLEPOOL** Date of First Survey **4th March** Date of Last Survey **10th March 1902** No. of Visits **4**
 No. in Reg. Book **11784** on the ~~Steel~~ **Steel** **S. J. Sloterdijk** Port belonging to **Rotterdam**
 Built at **Hartlepool** By whom **Messrs Furness Withy & Co** When built **1901-2**
 Owners **Holland American Line** Owners Address **Rotterdam**
 Yard No. **260** Electric Light Installation fitted by **Messrs W. H. Allen Son & Co Ltd.** When fitted **1901-2**

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Double acting vertical open type 8-6 Engine Coupled direct to inverted horse-shoe two pole dynamo, both of Messrs W. H. Allen Son & Co Ltd

Capacity of Dynamo **150** Amperes at **60** Volts, whether continuous or alternating current **Continuous**

Where is Dynamo fixed **Starboard side of engine room, in recess under stove**

Position of Main Switch Board **In bunker bulkhead by dynamo having switches to groups A. B. C. D.** of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each **one for cable lights containing 4 switches at top of engine room, on starboard side**

If cut outs are fitted on main switch board to the cables of main circuit **Yes** and on each auxiliary switch boards 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

Are the cut outs of non-oxidizable metal **Yes** and constructed to fuse at an excess of **100** 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 **Yes**

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

Total number of lights provided for **equivalent of 138 lamps** arranged in the following groups:—

A	34	lights each of	16	candle power requiring a total current of	34	Amperes
B	21	lights each of	16	candle power requiring a total current of	21	Amperes
C	52	lights each of	16	candle power requiring a total current of	52	Amperes
D	36	lights each of	16	candle power requiring a total current of	36	Amperes
E		lights each of		candle power requiring a total current of		Amperes
2	Mast head light with	1 lamp each of	32	candle power requiring a total current of	4	Amperes
2	Side light with	1 lamps each of	32	candle power requiring a total current of	4	Amperes
6	Cargo lights of		96	candle power, whether incandescent or arc lights	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. **No arc lights**

Where are the switches controlling the masthead and side lights placed **In top wheel house**

DESCRIPTION OF CABLES.

Main cable carrying	138	Amperes, comprised of	34	wires, each	15	L.S.G. diameter,	.148	square inches total sectional area
Branch cables carrying	34	Amperes, comprised of	19	wires, each	18	L.S.G. diameter,	.0351	square inches total sectional area
Branch cables carrying	21	Amperes, comprised of	4	wires, each	16	L.S.G. diameter,	.0229	square inches total sectional area
Leads to lamps carrying	163	Amperes, comprised of	1	wires, each	16	L.S.G. diameter,	.00322	square inches total sectional area
Cargo light cables carrying	6	Amperes, comprised of	34	wires, each	30	L.S.G. diameter,	.005	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

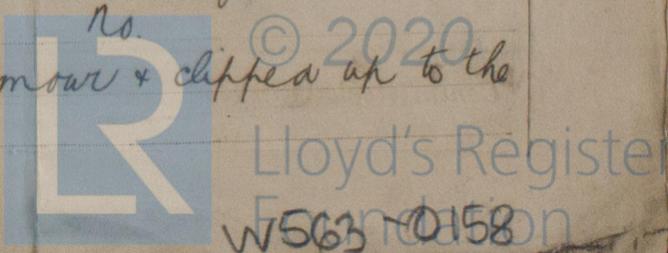
600 megohm vulcanized rubber cable braided & armoured, or lead sheathed & armoured.

Joints in cables, how made, insulated, and protected **No joints in cables.**

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 **Cables protected by armour & clipped up to the deck, or in strong wood casing.**



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 *Galvanized iron pipes lead sheathed & armoured*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead sheathed & armoured*

What special protection has been provided for the cables near boiler casings *Lead sheathed & armoured*

What special protection has been provided for the cables in engine room *Lead sheathed & armoured.*

How are cables carried through beams *In fibre ferrules* through bulkheads, &c. *In fibre ferrules*

How are cables carried through decks *In Galvanized iron pipes projecting 12" to 18" and lead with fibre*

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

If so, how are they protected *Armoured.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Yes in cable space*

If so, how are the lamp fittings and cable terminals specially protected *By enclosing in Cast iron fitting with hinged lid.*

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

If in the spaces, how are they specially protected *None in spaces*

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 *All double wire system.*

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 *not with* an amperemeter, fixed *on switchboard*

The copper used is guaranteed to have a conductivity of *100* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *600* 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.

For W. H. ALLEN, SON & Co Ltd.
C.P. Huntley.

Electrical Engineers

Date *26 March 02*

COMPASSES.

Distance between dynamo or electric motors and standard compass *118 feet*

Distance between dynamo or electric motors and steering compass *112*

The nearest cables to the compasses are as follows:— *All double wires*

A cable carrying	<i>34</i>	Amperes	<i>16</i>	feet from standard compass	<i>9</i>	feet from steering compass
A cable carrying	<i>6</i>	Amperes	<i>19</i>	feet from standard compass	<i>14</i>	feet from steering compass
A cable carrying	<i>9</i>	Amperes	<i>19</i>	feet from standard compass	<i>14</i>	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power *Not considered necessary.*

The maximum deviation due to electric currents, etc., was found to be *0* degrees on course in the case of the standard compass and *0* degrees on course in the case of the steering compass.

FURNESS, WITBY & CO., LIMITED.
per W. Jackson

Builder's Signature

Date *April 4th 02*

GENERAL REMARKS.

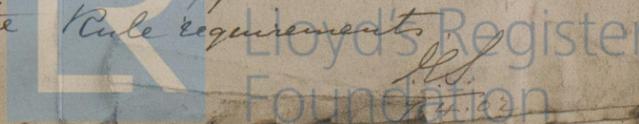
The fitting of the wires throughout this vessel are as stated on this report and appears to be in accordance with the Committee's requirements.

Allison B. Wilson

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

Committee's Minute

It is submitted that this installation appears to meet the Rule requirements.



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13