

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 66011

Port of NEWCASTLE-ON-TYNE Date of First Survey 5th Feb 1914 Date of Last Survey 1st April 1914 No. of Visits 4
 No. in Reg. Book on the Iron or Steel A. J. F. Main Port belonging to Hamburg
 Built at Williamson Quay By whom The Northumbrian I. B. Co. When built 1914
 Owners Hamburg-Amerika Line Owners' Address Hamburg
 Yard No. 214 Electric Light Installation fitted by Falvinn & Co. When fitted 1914

DESCRIPTION OF DYNAMO, ENGINE, ETC.

7 1/2 + 6 Open Vertical Com. coupled direct to
10.5 hp compound wound dynamo

Capacity of Dynamo 95.4 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Shutting Platform Whether single or double wire system is used Double

Position of Main Switch Board Near dynamo having switches to groups A, B, C, D of lights, &c., as below

Positions of auxiliary boards and numbers of switches on each 2-12 Way in Pantry
7 Way in Wheelhouse, 9 Way Carpenter's shop
8 - 0 - P.O. berth 7 - 0 - Engine room

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 25 per cent over the normal current

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

Total number of lights provided for 150 arranged in the following groups :-

A	Midships	66	lights each of	16	candle power requiring a total current of	31	Amperes
B	Engine room	28	lights each of	4	candle power requiring a total current of	19.3	Amperes
C	Up	23	lights each of	4	candle power requiring a total current of	11.7	Amperes
D	Engine Room	24	lights each of	4	candle power requiring a total current of	14.2	Amperes
E			lights each of		candle power requiring a total current of		Amperes
	2 Mast head lights with	2	lamps, each of	32	candle power requiring a total current of	2	Amperes
	2 Side lights with	2	lamps, each of	32	candle power requiring a total current of	2	Amperes
	5 Cargo lights of			6.16	candle power, whether incandescent or arc lights	Insufficient	

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

Where are the switches controlling the masthead and side lights placed Wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying	95.4	Amperes, comprised of	19	wires, each	14	S.W.G. diameter,	'0945	square inches total sectional area
Branch cables carrying	31	Amperes, comprised of	19	wires, each	18	S.W.G. diameter,	'024	square inches total sectional area
Branch cables carrying	19.3	Amperes, comprised of	7	wires, each	16	S.W.G. diameter,	'024	square inches total sectional area
Leads to lamps carrying	5	Amperes, comprised of	1	wires, each	18	S.W.G. diameter,	'0018	square inches total sectional area
Cargo light cables carrying	2	Amperes, comprised of	2	wires, each	20	S.W.G. diameter,	'0022	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

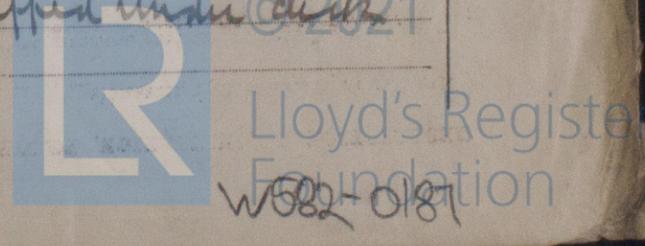
Tinned copper Pure - Vulkol I.R. taped braided compound

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

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

How are the cables led through the ship, and how protected Armoured clipped under deck



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Generally

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

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat 4

What special protection has been provided for the cables near boiler casings 4

What special protection has been provided for the cables in engine room 4

How are cables carried through beams Fibre bushes through bulkheads, &c. W. J. glands

How are cables carried through decks Deck 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 Yes

If so, how are they protected Amoured

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 fuses for these lights fitted

If in the spaces, how are they specially protected

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed W. J. sockets

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

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes, fixed in Main board

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

Are any switches, fuses, 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 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 _____ 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.

Gabriel Crowle Electrical Engineers Date May 18th 1914

COMPASSES.

Distance between dynamo or electric motors and standard compass 112 ft

Distance between dynamo or electric motors and steering compass 104 ft

The nearest cables to the compasses are as follows:—

A cable carrying <u>7</u> Amperes	<u>18</u> feet from standard compass	<u>10</u> feet from steering compass
A cable carrying <u>5</u> Amperes	<u>1</u> feet from standard compass	<u>1</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 courses in the case of the standard compass and Nil degrees on all course in the case of the steering compass.

Richard Garlick Builder's Signature. Date 22nd May 1914

GENERAL REMARKS.

This installation has been fitted in accordance with the requirements, it has been tried under full power, and in my opinion the vessel is eligible for the record of Elec. Light.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light J.W.N. 26/5/14

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



Im. 9.12.—Transfer.