

WED: 1-MAR-1916

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29158

Port of Hull. Date of First Survey 22/1/16 Date of Last Survey 25/1/16 No. of Visits 3
 No. in Reg. Book 13 on the Iron or Steel SS "PACIFIC" Port belonging to Hull.
 Built at Sunderland By whom Sunderland S.B. Co. When built 1916.
 Owners Lancashire Spg. Co. J. Chambers Owners' Address Charles S.B. & Co. Ltd. When fitted 1916.
 Yard No. Electric Light Installation fitted by Charles S.B. & Co. Ltd.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Open type single stroke engine by Robey & Co., Lincoln, coupled to a 11 Kilo-watt dynamo by J.H. Holmes & Co., Newcastle on Tyne.

Capacity of Dynamo 110 Amperes at 100 Volts, whether continuous or alternating current Continuous.

Where is Dynamo fixed Star^d side of engine room Whether single or double wire system is used Double.

Position of Main Switch Board Star^d side of E.R. having switches to groups 5 circuits of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in chart room with 8 switches
one in engine room star^d side with 6 switches.

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 50 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 porcelain.

Total number of lights provided for 111 arranged in the following groups:—

A	Accommodation	30 lights each of	16	candle power requiring a total current of	16.80	Amperes
B	Engine room	19 lights each of	16	candle power requiring a total current of	10.64	Amperes
C	Gift	13 lights each of	16	candle power requiring a total current of	7.28	Amperes
D	Cargo	30 lights each of	16	candle power requiring a total current of	16.80	Amperes
E	Navigation	3 are lamps 7 lights each of	16	candle power requiring a total current of	15	Amperes
		63	32			
2	Mast head light with	1 lamps each of	32	candle power requiring a total current of	1.12 each	Amperes
2	Side light with	1 lamps each of	32	candle power requiring a total current of	1.12 "	Amperes
5	Cargo lights of	16		candle power, whether incandescent or are lights		

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

Enclosed type.

Where are the switches controlling the masthead and side lights placed Chart room.

DESCRIPTION OF CABLES.

Main cable carrying	79.4 Amperes, comprised of	19 wires, each	14 S.W.G. diameter,	.095 square inches total sectional area
Branch cables carrying	16.8 Amperes, comprised of	7 wires, each	18 S.W.G. diameter,	.0126 square inches total sectional area
Branch cables carrying	10.64 Amperes, comprised of	7 wires, each	20 S.W.G. diameter,	.0070 square inches total sectional area
Leads to lamps carrying	56 Amperes, comprised of	1 wires, each	18 S.W.G. diameter,	.0018 square inches total sectional area
Cargo light cables carrying	3.27 Amperes, comprised of	108 wires, each	38 S.W.G. diameter,	.0030 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

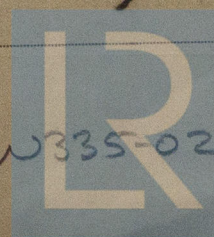
All main cables viz: India Rubber & Gutta Percha taped & braided. All wires in rooms, engine room, crew space etc lead covered.

Joints in cables, how made, insulated, and protected None. All mechanical connections at Distribution Boxes.

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 None.

How are the cables led through the ship, and how protected Through pipes in Bridge at space both fore and aft.



© 2020

W335-0250

Lloyd's Register Foundation

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Bridge deck space. (yes)*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead covered wire.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered wire.*

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

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

How are cables carried through beams *through bulkheads, &c. A.T. Gland.*

How are cables carried through decks *Deck pipes secured nuts washers to bottom of BK.*

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 *Galvanized iron pipes with C.I. inspection boxes.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *none.*

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 *none.*

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 *✓*

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 *Main S. 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 *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.

ENGINEERING COMPANY, LIMITED.

Cartwright Electrical Engineers

Date *28/2/16*

COMPASSES.

Distance between dynamo or electric motors and standard compass

130 feet

Distance between dynamo or electric motors and steering compass

120 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>7.28.</i>	<i>12</i>	<i>10</i>	
<i>✓</i>	<i>✓</i>	<i>✓</i>	
<i>✓</i>	<i>✓</i>	<i>✓</i>	

Have the compasses been adjusted with and without the electric installation at work at full power

The maximum deviation due to electric currents, etc., 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.

ENGINEERING COMPANY, LIMITED.

Cartwright Builder's Signature.

Date *28/2/16*

GENERAL REMARKS.

This installation of electric light has been well fitted. The materials & workmanship are good. It has been tried under full working and found satisfactory.

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

J.W.D.
27/3/16

J.G. MacKillop.

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 11. 12. Transfer.



© 2020

Lloyd's Register Foundation