

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 26112

Port of Sunderland Date of First Survey 20-4-14 Date of Last Survey 14-5-14 No. of Visits 3
 No. in Reg. Book on the Iron or Steel 38 Moore's Prince Port belonging to Newcastle
 Built at Sunderland By whom Messrs. Short Bros. When built 1914
 Owners Prince Line Ltd Owners' Address _____
 Yard No. 384 Electric Light Installation fitted by Messrs. Clarke Chapman & Co. When fitted 1914

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One single cylinder double acting open type vertical engine direct coupled to a continuous current compound wound dynamo.
 Capacity of Dynamo 155 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed in Engine Room Whether single or double wire system is used double
 Position of Main Switch Board near Dynamo having switches to groups A B C D E F of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Each light & group of lights provided with switches as required

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 deduced 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 yes slate & porcelain
 Total number of lights provided for 230-100 arranged in the following groups:—

Group	Number of lights	Each of	Candle power	Requiring a total current of	Amperes
A	64	lights each of 16	candle power requiring a total current of	32.6	Amperes
B	60	lights each of 16	candle power requiring a total current of	30.5	Amperes
C	35	lights each of 16	candle power requiring a total current of	17.8	Amperes
D	32	lights each of 16	candle power requiring a total current of	16.3	Amperes
E	20	lights each of 16	candle power requiring a total current of	13.2	Amperes
2	Mast head light with 1 lamp each of 32	candle power requiring a total current of	2.2	Amperes	
2	Side light with 1 lamp each of 32	candle power requiring a total current of	2.2	Amperes	
8	Cargo lights of 5.32	candle power, whether incandescent or arc lights	incandescent		

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

Where are the switches controlling the masthead and side lights placed in wheel house

DESCRIPTION OF CABLES.

Main cable carrying 155 Amperes, comprised of 37 wires, each 14 S.W.G. diameter, .182 square inches total sectional area
 Branch cables carrying 32.6 Amperes, comprised of 7 wires, each 14 S.W.G. diameter, .035 square inches total sectional area
 Branch cables carrying 17.8 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area
 Leads to lamps carrying 51 Amperes, comprised of 1 wires, each 19 S.W.G. diameter, .008 square inches total sectional area
 Cargo light cables carrying 5 Amperes, comprised of 176 wires, each 38 S.W.G. diameter, .0050 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

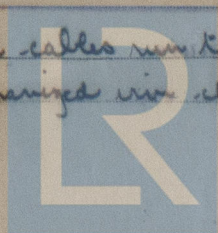
Insulated india rubber dipped & braided & lead covered where exposed steel
Alumined steel

Joints in cables, how made, insulated, and protected no joints except mechanical ones

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 no

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 lead covered & steel alumined cables run through timber decks & clipped to top side of fore & aft girders with strong galvanized wire clips



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *no*.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *lead lined & steel armored*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *lead lined & steel armored*

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 *in lead bushes* through bulkheads, &c. in WT glands

How are cables carried through decks *in galvanized iron deck tubes*

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 *lead lined & steel armored cables*

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

If so, how are the lamp fittings and cable terminals specially protected *shung cast iron fittings with covers*

Where are the main switches and fuses for these lights fitted *in main houses forward & aft*

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 *to WT or connection boxes*

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

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 *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

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 1000 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.

For Clarke, Chapman & Co. Ltd.

Electrical Engineers

Date

May 28th 1914

COMPASSES.

W. W. W. W. W. Chairman.

Distance between dynamo or electric motors and standard compass *110 ft*

Distance between dynamo or electric motors and steering compass *104 ft*

The nearest cables to the compasses are as follows:—

A cable carrying *.51* Amperes *12* feet from standard compass *6* feet from steering compass

A cable carrying *.51* Amperes *6* feet from standard compass *12* 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* courses in the case of the steering compass.

FOR SHORT BROTHERS, LIMITED

Builder's Signature

Date

May 30th 1914

GENERAL REMARKS.

The installation has been satisfactorily fitted in the vessel, tested at full load and found good.

It is submitted that

this vessel is eligible for

THE RECORD. Elec light.

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

Committee's Minute