

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 61982

Port of Newcastle on Tyne Date of First Survey 12th March Date of Last Survey 25th Mar. 1912 No. of Visits 6

No. in Reg. Book on the ^{Fug} "Dreadful" Steel Port belonging to
supp. 49 Built at South Shields By whom Bepple & Co., Ltd. When built 1911

Owners Canadian Western Lumber Co. Owners' Address The Northern Electrical Engineering & Plating Co., Ltd. When fitted 1912.
Yard No. 621 Electric Light Installation fitted by North Shields

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound wound generator with Direct Connected $4\frac{1}{2} \times 4 - 600$ rpm. vertical engine.
Capacity of Dynamo 4 Kw. Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed
Position of Main Switch Board having switches to groups Five main circuits of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each switch. Each switch point fitted as near as possible to respective light. An average of two lights on each.

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

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 25% 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

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

Total number of lights provided for		73		arranged in the following groups:—	
A	11 lights each of	16	candle power requiring a total current of	4.9	Amperes
B	26 lights each of	16	candle power requiring a total current of	11.7	Amperes
C	14 } lights each of	32 }	candle power requiring a total current of	6.3	Amperes
D	6 lights each of	16	candle power requiring a total current of	3.6	Amperes
E	2 lights each of	16	candle power requiring a total current of	2.7	Amperes
2	Mast head lights with 1 lamp each of	16	candle power requiring a total current of	.90	Amperes
2	Side lights with 1 lamp each of	16	candle power requiring a total current of	.90	Amperes

Cargo lights of not installed candle power, whether incandescent or arc lights
If arc lights, what protection is provided against fire, sparks, &c. Cable circuit for searchlight projector taking 20 amperes.

Where are the switches controlling the masthead and side lights placed Chart House. What house

DESCRIPTION OF CABLES.

Main cable carrying	36	Amperes, comprised of	40 wires, each	20 L.S.G. diameter,	.2023 square inches total sectional area
Branch cables carrying	11	Amperes, comprised of	7 wires, each	17" L.S.G. diameter,	.01706 square inches total sectional area
Branch cables carrying	11	Amperes, comprised of	7 wires, each	18" L.S.G. diameter,	.01254 square inches total sectional area
Leads to lamps carrying	6	Amperes, comprised of	7 wires, each	18" L.S.G. diameter,	.001810 square inches total sectional area
Cargo light cables carrying	0.8	Amperes, comprised of	7 wires, each	2 1/2" L.S.G. diameter,	.004896 square inches total sectional area
Searchlight cable				16 L.S.G. diameter,	.02227 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

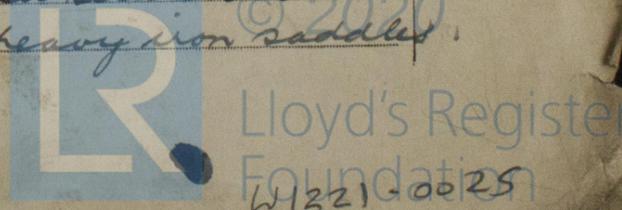
(a) Pure rubber, vulcanised rubber & taped & braided.
(b) Lead covered & lead cord & gal. iron wire armoured.
also screwed galvanised conduit

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

Are all the joints of cables thoroughly soldered, resin only having been used as a flux Are all joints in accessible positions, none being made in bunks, 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 lead covered & armoured secured with gal. iron saddles; and gal. screwed conduits on heavy iron saddles.



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 in conduit and armoured cable

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

What special protection has been provided for the cables near boiler casings Armoured cables (no cables done)

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

How are cables carried through beams armoured cable through bulkheads, &c. armoured cable

How are cables carried through decks armoured cables made watertight

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

If so, how are they protected armoured cable

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 cut outs for these lights fitted

If in the spaces, how are they specially protected

Are any switches or cut outs fitted in bunkers No

Cargo light cables, whether portable or permanently fixed _____ 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

The installation is yes supplied with a voltmeter and yes an amperemeter, fixed on switch board

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 copper used is guaranteed to have a conductivity of 98% 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. all wiring was done by The Northern Electrical and Plating Co. Ltd, North Shields. all fittings were supplied installed by the General Electric Co. Ltd, Vauxhall. Mather Jull & Co. Ltd.

Electrical Engineers Date October 11th 1912.

COMPASSES.

Distance between dynamo or electric motors and standard compass _____

Distance between dynamo or electric motors and steering compass _____

The nearest cables to the compasses are as follows:—

A cable carrying	<u>20</u>	Amperes	<u>6</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>.45</u>	Amperes	<u>to Binnacle</u>	feet from standard compass	<u>to Binnacle</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

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.

Builder's Signature. _____ Date _____

GENERAL REMARKS.

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

J.W.D.
15/11/12

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

Committee's Minute _____

REPORT FORM No. 13.—20134.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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