

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 28195

Port of Hull Date of First Survey 11-12-14 Date of Last Survey 24-12-14 No. of Visits 6
 No. in 4 on the Iron or Steel S.T. "acantha" Port belonging to Grimaby
 Reg. Book 478 Built at Selby By whom Cochrane & Sons When built 1914
 Owners Equitable S. F. Co. Ltd. Owners' Address Grimaby
 Yard No. 621 Electric Light Installation fitted by M. Jennison Esq. When fitted Dec. 1914

DESCRIPTION OF DYNAMO, ENGINE, ETC.

High speed enclosed engine direct coupled to dynamo.

Capacity of Dynamo 31 Amperes at 65 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 in engine room having switches to groups 8 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each one in wheelhouse for sailing lights

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

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

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

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

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

A	Casing.	24	lights each of	25	candle power requiring a total current of	24	Amperes
B	Engg. etc.	6	lights each of	25	candle power requiring a total current of	6	Amperes
C	Forward	4	lights each of	25	candle power requiring a total current of	4	Amperes
D	General	15	lights each of	25	candle power requiring a total current of	15	Amperes
E		10	lights each of	10	candle power requiring a total current of	10	Amperes
3	Must head light with	3	lamps each of	25	candle power requiring a total current of	3	Amperes
2	Side light with	2	lamps each of	25	candle power requiring a total current of	2	Amperes
1	Stem	1	lamps each of	25	candle power requiring a total current of	1	Amperes
	Cargo lights of				candle power, whether incandescent or arc lights		

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

Where are the switches controlling the masthead and side lights placed in wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying 65 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area
 Branch cables carrying 10 Amperes, comprised of 7 wires, each 22 S.W.G. diameter, .0042 square inches total sectional area
 Branch cables carrying 1 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Leads to lamps carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area
 Cargo light cables carrying 4 Amperes, comprised of 70 wires, each 36 S.W.G. diameter, .0022 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

VIR. 600 L. Taped & Braided cables

Joints in cables, how made, insulated, and protected mechanical joints on porcelain

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances no 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 no

How are the cables led through the ship, and how protected Solid drawn screwed galvanized steel conduct



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible

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

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

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

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

How are cables carried through beams *through bulkheads, &c. backnuts & grunnells*

How are cables carried through decks

Are any cables run through coal bunkers *yes* or cargo spaces *yes* or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected *protecting plate in bunkers*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coats, or baggage *1 in fishroom*

If so, how are the lamp fittings and cable terminals specially protected *W. S. fitting*

Where are the main switches and fuses for these lights fitted *in engineroom*

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

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 eng. room*

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.

L. J. Brinson

Electrical Engineers

Date *Jan 21st 1914*

COMPASSES.

Distance between dynamo or electric motors and standard compass

40 ft approx

Distance between dynamo or electric motors and steering compass

" " "

The nearest cables to the compasses are as follows:—

A cable carrying	<i>1</i>	Amperes	<i>2</i>	feet from standard compass	<i>2</i>	feet from steering compass
A cable carrying		Amperes		feet from standard compass		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.

FOR COCHRANE & SONS LTD.

A. Boche

Builder's Signature. Date

GENERAL REMARKS.

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

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

J. G. Mackillop

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

Committee's Minute

Im. 11.13. Transfer.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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