

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 24241

Port of *Hull*Date of First Survey *25th July*Date of Last Survey *8th Dec 1911*No. of Visits *6*No. in
Reg. Book *263*on the ~~Iron~~ *Steel**Sc. Sr. Harrogate*Port belonging to *Hull*Built at *Hull*By whom *Messrs Eames & Co*When built *1911*Owners *J. Wilson Sons & Co Ltd*Owners' Address *Hull*Yard No. *578*Electric Light Installation fitted by *J. Wilson Sons & Co Ltd*When fitted *1911*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound wound Dynamo by The Brush & Co Ltd coupled direct to a vertical direct acting Eng. by Messrs Robey & Co

Capacity of Dynamo *120* Amperes at *100* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *Starboard side of Eng. 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* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *Each light and group of lights provided with switches as necessary.*

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 *50* 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 *yes*

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

Total number of lights provided for *127* arranged in the following groups:—

A Eng. Room	29 lights each of	16	candle power requiring a total current of	14.5	Amperes
B Saloon	40 lights each of	16	candle power requiring a total current of	20.0	Amperes
C Aft	20 lights each of	16	candle power requiring a total current of	10.0	Amperes
D Forecastle	12 lights each of	16	candle power requiring a total current of	6.0	Amperes
E Amidship	18 lights each of	16	candle power requiring a total current of	9.0	Amperes
2 Mast head light with	2 lamps each of	32	candle power requiring a total current of	2.0	Amperes
2 Side light with	2 lamps each of	32	candle power requiring a total current of	2.0	Amperes

Four of 6. Two of 4 Cargo lights of *16* candle power, whether incandescent or arc lights *incandescent*

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

Where are the switches controlling the masthead and side lights placed *Chart House*

DESCRIPTION OF CABLES.

Main cable carrying	70 Amperes, comprised of	19 wires, each	16 L.S.G. diameter, .0612 square inches total sectional area
Branch cables carrying	14.5 Amperes, comprised of	7 wires, each	18 L.S.G. diameter, .0127 square inches total sectional area
Branch cables carrying	20 Amperes, comprised of	7 wires, each	16 L.S.G. diameter, .0225 square inches total sectional area
Leads to lamps carrying	.5 Amperes, comprised of	1 wires, each	18 L.S.G. diameter, .00181 square inches total sectional area
Cargo light cables carrying	3 Amperes, comprised of	110 wires, each	36 L.S.G. diameter, .0005 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

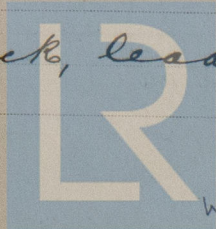
Pure rubber, taped, braided, and lead covered in accommodation, steel armoured, where exposed.

Joints in cables, how made, insulated, and protected *None*

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 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 *Clipped up under deck, lead covered and armoured.*



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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 covered & armoured*

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

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

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

How are cables carried through beams *In holes* ✓ through bulkheads, &c. *W. I. glands* ✓

How are cables carried through decks *in Galv Iron pipes* ✓

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 *Lead covered and armoured* ✓

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 *Brass guards & Iron caps* ✓

Where are the main switches and cut outs for these lights fitted *In tween decks* ✓

If in the spaces, how are they specially protected *C. I. Boxes* ✓

Are any switches or cut outs fitted in bunkers *No* ✓

Cargo light cables, whether portable or permanently fixed *Portable* ✓ How fixed *W. I. 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 _____

The installation is *now* ✓ supplied with a voltmeter and *also* ✓ an amperemeter, fixed *on main 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 *100* ✓ 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.

FOR THOS. WILSON, SONS & CO. LTD.

W. S. H. Day

Electrical Engineers

Date _____

COMPASSES.

Distance between dynamo or electric motors and standard compass *95 feet*

Distance between dynamo or electric motors and steering compass *90 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>1</i>	Amperes	<i>3</i>	feet from standard compass	<i>8</i>	feet from steering compass
A cable carrying	<i>.5</i>	Amperes	<i>is fitted inside feet from</i>	standard compass	<i>and also</i>	<i>feet from steering compass</i>
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.

FOR EARLE'S
F. J. Dalrymple

SECRETARY

Builder's Signature.

Date *5th Dec 1911*

GENERAL REMARKS.

This vessel has been fitted with an Electric Installation as above, it was tested, & found satisfactory and is eligible in my opinion for notation in Register Book. It is submitted that this vessel is eligible for THE RECORD, Elec. light.

James Barclay

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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