

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6239

Port of Belfast Date of First Survey Sept 17th Date of Last Survey Nov 7th No. of Visits 16
 No. in Reg. Book on the Iron or Steel L. S. S. Rohilla Port belonging to Glasgow
 Built at Belfast By whom Harland & Wolff. Ltd When built 1906
 Owners British India Steam Nav. Co. Ltd Owners' Address London
 Yard No. 381 Electric Light Installation fitted by J. H. Holmes & Co When fitted 1906

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two coupled sets each consisting of $10\frac{1}{2} \times 16 \times 4\frac{1}{2}$ "Stoke" Steam Engine 103 BHP. 100 lbs. 450 Revs by Pul to coupled to a No. 19/21 Dynamo by J. H. Holmes & Co. compound wound

Capacity of Dynamo 685 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Bottom platform Port & Starboard Engine Room Whether single or double wire system is used D. W. S.

Position of Main Switch Board Aft Bulkhead in Eng. Room having switches to groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

See Details attached

Hereto

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 no

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 arranged in the following groups:-

A lights each of see details attached hereto candle power requiring a total current of Amperes

B lights each of see details attached hereto candle power requiring a total current of Amperes

C lights each of see details attached hereto candle power requiring a total current of Amperes

D lights each of see details attached hereto candle power requiring a total current of Amperes

E lights each of see details attached hereto candle power requiring a total current of Amperes

2 Mast head lights with 1 lamp each of 32 candle power requiring a total current of 1.92 Amperes

2 Side lights with 1 lamp each of 32 candle power requiring a total current of 1.92 Amperes

5 Cargo lights of 8 x 16 candle power, whether incandescent or arc lights incandescent

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

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

DESCRIPTION OF CABLES.

Main cable carrying 441 Amperes, comprised of 61 wires, each 11 L.S.G. diameter, .634 square inches total sectional area

Branch cables carrying Amperes, comprised of wires, each see details attached hereto L.S.G. diameter, square inches total sectional area

Branch cables carrying Amperes, comprised of wires, each see details attached hereto L.S.G. diameter, square inches total sectional area

Leads to lamps carrying .56 Amperes, comprised of 4 wires, each 23 L.S.G. diameter, .0031 square inches total sectional area

Cargo light cables carrying 4.48 Amperes, comprised of 108 wires, each 38 L.S.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables are insulated with pure rubber Vulk with two lappings of tape & further sheathed in solid drawn lead & Braided in accommodation & and further protective by galv. iron wire armouring Braided overal elsewhere

Joints in cables, how made, insulated, and protected

no joints. connections Boxes used thro' out

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 cables led fore & aft middle tween

Decks starboard side in steel casing

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes - When cargo is out.*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead sheathing*
protecting wires of galv. iron Braided overall

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 *Bushes* through bulkheads, &c. *stuffing Boxes*

How are cables carried through decks *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 covered armoured & Braided & enclosed in steel casing*

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 *strong glasses protected by solid iron covers*

Where are the main switches and cut outs for these lights fitted *in the space*

If in the spaces, how are they specially protected *Water-tight C.I. Boxes.*

Are any switches or cut outs 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 *_____*

The installation is *_____* supplied with *2* voltmeters and *two* amperemeters fixed *on main subd.*

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 *1250* 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.

A. H. Holmes & Co. Electrical Engineers Date *18/12/06*

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 200 ft*

Distance between dynamo or electric motors and steering compass *" 185 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>10.4</i>	<i>12</i>	<i>8</i>	<i>8</i>
<i>28.56</i>	<i>54</i>	<i>48</i>	<i>48</i>
<i>42.2</i>	<i>54</i>	<i>48</i>	<i>48</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 *no* degrees on *all* course in the case of the standard compass and *no* degrees on *all* course in the case of the steering compass.

For Harland & Wolff Ltd Builder's Signature. Date *1st Jan 1907*

GENERAL REMARKS.

This installation appears to be of good description, and has been fitted in accordance with the Rules.

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

Committee's Minute

It is submitted that the Record Elec. Light be noted in the Reg. Book