

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3629.

Port of Dublin Date of First Survey 25 Aug/16 Date of Last Survey 4 Oct/16 No. of Visits 5  
 No. in on the ~~Iron~~ Steel S.S. Hindustan Port belonging to Belfast  
 Reg. Book 797 Built at Belfast By whom Workman Clark & Co When built 1902  
 Owners Irish Ship Owners Co Ltd (London & Co Ltd) Owners' Address J. H. Sherwood  
 Yard No. Electric Light Installation fitted by When fitted Sept 16

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Engine by Swanland Forge Co discharging 385 R.P.M. 7" dia x 5" stroke @ 85 lbs  
 direct coupled to dynamo on same bed plate  
 Capacity of Dynamo 73 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Starboard of engine room Whether single or double wire system is used double  
 Position of Main Switch Board engine room having switches to groups Five of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each No auxiliary switch boards = auxiliary fuse boards  
 situated A engine room B mess room C Pantry D chart Room E Forward accommodation  
 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 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  
 Total number of lights provided for 112 arranged in the following groups:—  
 A 21 lights each of 14-16 cp 7-8 cp candle power requiring a total current of 10 Amperes  
 B 20 lights each of 16 cp candle power requiring a total current of 10 Amperes  
 C 15 lights each of 10-50 watt 5 1/2 cp candle power requiring a total current of 8 Amperes  
 D 4 also mast head light lights each of 16 candle power requiring a total current of 2.2 Amperes  
 E 10 lights each of 16 candle power requiring a total current of 5.5 Amperes  
2 Mast head light with 1 lamps each of double filament 32 candle power requiring a total current of 1.1 Amperes  
2 Side light with 1 lamps each of " " " candle power requiring a total current of 1.1 Amperes  
5 Cargo lights of cluster of 6 16 = 30 lamps candle power, whether incandescent or arc lights 16 4  
 If arc lights, what protection is provided against fire, sparks, &c. no arc lights also 18.0 amperes for incand  
72.3

Where are the switches controlling the masthead and side lights placed chart Room

## DESCRIPTION OF CABLES.

Main cable carrying 73 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, .06 square inches total sectional area  
 A Branch cables carrying 10 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area  
 B Branch cables carrying 10 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area  
 Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area  
 Cargo light cables carrying 3.3 Amperes, comprised of 138 wires, each 38 S.W.G. diameter, .0044 square inches total sectional area

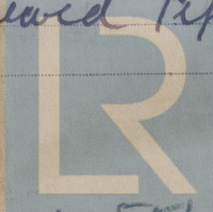
## DESCRIPTION OF INSULATION, PROTECTION, ETC.

vulcanized india rubber - lapped braided & compounded overall  
800 megohms resistance  
also lead covered in accommodation

Joints in cables, how made, insulated, and protected

no joints - all wires lapped inAre 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 baggageAre 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

galvanized iron - screwed pipes



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

lead covering.

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

lead covering.

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

galvanised iron pipes.

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

do

do

How are cables carried through beams

clipped to underside of same

through bulkheads, &c.

W.T. glands.

How are cables carried through decks

deck tubes. 15" high

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

galvanised iron piping

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

no - portable lamp used

If so, how are the lamp fittings and cable terminals specially protected

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Where are the main switches and fuses for these lights fitted

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If in the spaces, how are they specially protected

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Are any switches or fuses fitted in bunkers

no

Cargo light cables, whether portable or permanently fixed

portable

How fixed

portable to connecting plugs.

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

double wire

How are the returns from the lamps connected to the hull

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Are all the joints with the hull in accessible positions

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Is the installation supplied with a voltmeter

Yes

and with an amperemeter

Yes.

fixed on main S. Board.

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

not for such use

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 800 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.

A. G. Sherwood

24 Bachelors Walk Dublin

Electrical Engineers

Date

27/8/16

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:—

Cable	Amperes	feet from standard compass	feet from steering compass
A cable carrying E. 5.5	30	30	30
A cable carrying B. 10.0	30	30	30
A cable carrying			

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.

This installation has been fitted in accordance with the Rules. It has been tested, & is apparently satisfactory in every respect.

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

Electric Light

MacWilliam

27/8/16.

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

Committee's Minute