

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 15318.

Port of WEST HARTLEPOOL Date of First Survey and Date of Last Survey while Building No. of Visits 1
 in on the Iron or Steel 1.1.1916 Port belonging to new Palmleaf
 Book Built at Wish Aulley-vol By whom Messrs. Jones & Co. - 82 to 101 When built 1916
 Owners Lane & Macandrew & Co. Owners' Address London
 Card No. 557 Electric Light Installation fitted by Falmer, Bros & Co. When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 totally enclosed Eng. by Brown & Lushington to imperial Dyn. by black construction to
1 open type Eng. to imperial wound dyn.

Capacity of Dynamo 250 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Room Top Plate, structure Whether single or double wire system is used double

Position of Main Switch Board New dynamo having switches to groups A. B. C. D. E. of lights, &c., as below

Positions of auxiliary from boards and numbers of fuses on each 1+3+1+7 Way in Foremast Mess

10 Way in blackroom, 1+6+1+9 Way in Middlest. Passage, 1+3+1+9 Way in Passage Aft

9 - Eng. Room

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 25 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 312 arranged in the following groups :-

A Forward	76	lights each of	16	candle power requiring a total current of	44.4	Amperes
B Midship	21	lights each of	16	candle power requiring a total current of	11.7	Amperes
C Aft	98	lights each of	16	candle power requiring a total current of	46.8	Amperes
D Eng. room	80	lights each of	16	candle power requiring a total current of	41.7	Amperes
E Eng. room 2	37	lights each of	16	candle power requiring a total current of	15.1	Amperes
2 Mast head lights with, 1 lamp each of	32			candle power requiring a total current of	2.4	Amperes
2 Side lights with, 1 lamp each of	32			candle power requiring a total current of	2.4	Amperes
6 Cargo lights of	8 x 50			candle power, whether incandescent or arc lights	Incandescent	

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

Where are the switches controlling the masthead and side lights placed blackroom

DESCRIPTION OF CABLES.

Main cable carrying 250 Amperes, comprised of 61 wires, each 15 S.W.G. diameter, .245 square inches total sectional area

Branch cables carrying 44.4 Amperes, comprised of 19 wires, each 17 S.W.G. diameter, .046 square inches total sectional area

Branch cables carrying 46.8 Amperes, comprised of 19 wires, each 17 S.W.G. diameter, .046 square inches total sectional area

Leads to lamps carrying .6 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 14.4 Amperes, comprised of 7 wires, each 17 S.W.G. diameter, .017 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated copper, gum - vulcanized J.R. taped & lead wound

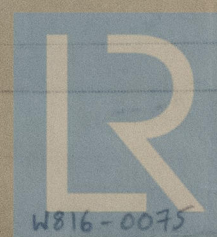
Joints in cables, how made, insulated, and protected

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances

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

How are the cables led through the ship, and how protected In iron pipe



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Generally*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead covered & painted*

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

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

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

How are cables carried through beams *Fibre bushes* through bulkheads, &c. *W. J. Blunts*

How are cables carried through decks *Deck tubes*

Are any cables run through coal bunkers *No* or cargo spaces *No* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *Imm. pipe*

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 *Special guarded fittings*

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

If in the spaces, how are they specially protected *No*

Are any switches or fuses fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *W. J. Blunts*

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 *Main 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 *Yes*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *No*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *Gas tight fittings*

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 *2500* 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.

Falconer, Lion & Co.

Electrical Engineers

Date *Dec 14 1916*

COMPASSES.

Distance between dynamo or electric motors and standard compass *180 ft.*

Distance between dynamo or electric motors and steering compass *175 "*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>11.7</i>	<i>12</i>	<i>8</i>	
<i>1</i>	<i>1</i>	<i>1</i>	

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 *4.10* degrees on *steering compass* course in the case of the standard compass and *steering compass* course in the case of the steering compass.

FOR IRVINE'S SHIP BUILDING & DRY DOCKS CO., LIMITED.

A. B. Gordon

Builder's Signature.

Date *31st Dec 1916*

GENERAL REMARKS.

MANAGING DIRECTOR.

The above installation has been carried out in accordance with the Requirements of the Rules & the specification & worked satisfactorily rendering this Vessel Eligible in my opinion to have the record of Electric Light in the Register Book.

This vessel is eligible for THE RECORD Elec. light.

A. B. Gordon

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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