

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 15322

Port of West Hartlepool Date of First Survey and Date of Last Survey While Building No. of Visits 1
 No. in Reg. Book on the Iron or Steel Penwickhall Port belonging to West Hartlepool
 Built at West Hartlepool By whom Messrs James J. B. & S. L. Ltd When built 1916
 Owners West Hartlepool Steam Navigation Co. Ltd Owners' Address West Hartlepool
 Yard No. 556 Electric Light Installation fitted by Falconer, Brown & Co When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

7 1/2" x 6" open type engine direct coupled to
compound wound dynamo
 Capacity of Dynamo 143 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Starting Platform Whether single or double wire system is used Single
 Position of Main Switch Board New dynamo having switches to groups A. B. C. of lights, &c., as below
 Positions of auxiliary two boards and numbers of two switches on each 1x3 + 1x5 Masthead Bulbroom
1x9 Way in Wheelhouse, 1x3 Way in Paint room, 1x7 Way in Engine Room
1x3 + 1x5 Way in Messroom, 1x7 Way in Passage aft, 1x3 Way 4th Deck Bulk
 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 cessel 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 135 arranged in the following groups :-

A Masthead 2	54	lights each of	16	candle power requiring a total current of	32.4	Amperes
B Eng. room 2	31	lights each of	16	candle power requiring a total current of	18.6	Amperes
C Eng. Off. 2	50	lights each of	16	candle power requiring a total current of	30	Amperes
D		lights each of		candle power requiring a total current of		Amperes
E		lights each of		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	2.4	Amperes
2 Side lights with 1 lamp each of			32	candle power requiring a total current of	2.4	Amperes
4 Cargo lights of			5 x 16	candle power, whether incandescent or arc lights	Insufficient	

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

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

DESCRIPTION OF CABLES.

Main cable carrying 143 Amperes, comprised of 37 wires, each 15 S.W.G. diameter, .149 square inches total sectional area
 Branch cables carrying 32.4 Amperes, comprised of 19 wires, each 18 S.W.G. diameter, .034 square inches total sectional area
 Branch cables carrying 20 Amperes, comprised of 19 wires, each 18 S.W.G. diameter, .034 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 3 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper, Pure Para rubber, Mho rubber taped & braided

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 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 In iron tube



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 Armoured - Braided

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 Fiber bushes through bulkheads, &c. W. J. glands

How are cables carried through decks Deck holes

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 Iron pipe

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage No

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

Where are the main switches and fuses for these lights fitted

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 W. J. 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

Is the installation supplied with a voltmeter Yes and with an amperemeter Yes, fixed On 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

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.

Falconer, Cross & Co. Electrical Engineers Date Dec. 14. 1916

COMPASSES.

Distance between dynamo or electric motors and standard compass 96 ft.

Distance between dynamo or electric motors and steering compass 96 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>12.6</u>	Amperes	<u>12</u>	feet from standard compass	<u>16</u>	feet from steering compass
A cable carrying	<u>.6</u>	Amperes	<u>1</u>	feet from standard compass	<u>1</u>	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 Yes

The maximum deviation due to electric currents, etc., was found to be no degrees on any course in the case of the standard compass and any course in the case of the steering compass.

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

A. S. Purdon Builder's Signature. Date 31st Dec 1916

GENERAL REMARKS.

The above installation has been carried out in accordance with the requirements of the Rules & worked efficiently rendering the vessel eligible in my opinion to have the record of "Electric Light" in the Register Book

W. J. G. Smith Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

