

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9274

Port of Middlesbrough Date of First Survey White Date of Last Survey Building No. of Visits 1
 No. in on the ~~Iron~~ Steel S.S. "Aladesa" Port belonging to Liverpool
 Reg. Book 101 Built at Middlesbrough By whom Messrs. Sir Raylton Dixon & Co When built 1916
 Owner Furness Houlder Argentine Lines, Ltd. Owners' Address Liverpool
 Yard No. _____ Electric Light Installation fitted by G.H. Holmes & Co When fitted 1915-16

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two coupled plants each consisting of:- One 8" x 6" single cylinder enclosed, forced lubrication engine by James Howden & Co, coupled to one "Holmes" compound wound dynamo to run @ 350 R.P.M.

Capacity of Dynamo 125 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Starboard Side of Engine Room. Whether single or double wire system is used double

Position of Main Switch Board near dynamos 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
See separate list attached.

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 of cables of all circuits including lamp circuits yes.

Are the fuses of non-oxidizable metal yes, and constructed to fuse at an excess of 100 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 220-166 P, 5-326 P, 8-8 CP arranged in the following groups:-

A	49	lights each of	16	candle power requiring a total current of	24.44	Amperes
B	42	lights each of	16	candle power requiring a total current of	40.32	Amperes
C	36	lights each of	16	candle power requiring a total current of	20.16	Amperes
D	14	lights each of	16	candle power requiring a total current of	4.84	Amperes
E	24	lights each of	16	candle power requiring a total current of	15.12	Amperes
2	Mast head lights with	1 lamp each of	32	candle power requiring a total current of	2.24	Amperes
2	Side lights with	1 lamp each of	32	candle power requiring a total current of	2.24	Amperes
12	Cargo lights of	6 + 16	candle power, whether incandescent or arc lights	incandescent		

included above

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

Where are the switches controlling the masthead and side lights placed in Blat Room.

DESCRIPTION OF CABLES.

Main cable carrying 125 Amperes, comprised of 34 wires, each 16 S.W.G. diameter, .114 square inches total sectional area

Branch cables carrying 40.3 Amperes, comprised of 19 wires, each 18 S.W.G. diameter, .034 square inches total sectional area

Branch cables carrying 24.4 Amperes, comprised of 4 wires, each 15 S.W.G. diameter, .028 square inches total sectional area

Leads to lamps carrying .56 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 6.72 Amperes, comprised of 4 wires, each 20 S.W.G. diameter, .004 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated with pure vulcanised India Rubber, lead covered, or armoured with a layer of galv. steel wires, & braided & compounded.

Joints in cables, how made, insulated, and protected none, looping-in system carried out or connection boxes used.

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 Lead covered, clipped up in Accommodation. Mains, U.S.P. in Galv. Iron Pipes run on deck. Machinery Spaces, wires armoured & braided.



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 Armoured braided.

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

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

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

How are cables carried through beams bushed with fibre through bulkheads, &c. stuffing glands.

How are cables carried through decks deck tubes, flanged made watertight.

Are any cables run through coal bunkers yes or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage used as meat chambers.

If so, how are they protected V.S.R. in iron pipe. In Cargo Spaces Lead covered & armoured.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage In Cargo Spaces or Meat Chambers.

If so, how are the lamp fittings and cable terminals specially protected Special B.S. fittings with B.S. lids.

Where are the main switches and fuses for these lights fitted Top of Refrigerating Engine Room.

If in the spaces, how are they specially protected none.

Are any switches or fuses fitted in bunkers none.

Cargo light cables, whether portable or permanently fixed Portable How fixed Socket connection.

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 2 voltmeters, and with an amperemeter 2 ammeter, 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.

J.H.B.

J.H. Roberts, Esq. Electrical Engineers Date 27/3/16

COMPASSES.

Distance between dynamo or electric motors and standard compass approx 112 feet

Distance between dynamo or electric motors and steering compass " 110 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	inside	feet from standard compass	inside	feet from steering compass
<u>0.56</u>					
A cable carrying <u>6.8</u>	Amperes <u>10</u>		feet from standard compass <u>8</u>		feet from steering compass
A cable carrying <u>15.12</u>	Amperes <u>22</u>		feet from standard compass <u>18</u>		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 every course in the case of the standard compass and nil degrees on every course in the case of the steering compass.

FOR SIR RAYLTON DIXON & COMPANY, LIMITED.

[Signature] Builder's Signature. Date 9 MAY 1916

GENERAL REMARKS.

This Electric Light Installation has been fitted on board in accordance with the Rules and tried under full working conditions with satisfactory results.

It is submitted that this vessel is eligible for

THE RECORD Elec. Light.

J.W.D. 12/5/16

[Signature]

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 9.14.—Transfer.



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