

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 82600

Port of LIVERPOOL Date of First Survey 6th May Date of Last Survey 25th July No. of Visits 10
 No. in Reg. Book 07478 on the Iron or Steel S.S. "Allegheny" Port belonging to Liverpool
 Built at Bonmah's Quay By whom J. Brighton 16th St When built 1921
 Owners Anglo American Oil Co Ltd Owners' Address London
 Yard No. 322 Electric Light Installation fitted by Wesley Campbell & Isherwood Ltd When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Four pole, compound wound, protected type dynamo direct coupled to open, vertical, single cylinder type engine both mounted up cast iron baseplate
 Capacity of Dynamo 60 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 to dynamo having switches to groups five of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each engine room 6 switches, Forecastle, Saloon pantry, chart room 8 switches, Outside pump room 3 switches

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-oxidisable 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 78 arranged in the following groups :-

A	<u>14</u> lights each of <u>14-60</u>	candle power requiring a total current of	<u>16.6</u>	Amperes
B	<u>6</u> lights each of <u>2-32</u>	candle power requiring a total current of	<u>4.2</u>	Amperes
C	<u>5</u> lights each of <u>8-16</u>	candle power requiring a total current of	<u>3.5</u>	Amperes
D	<u>9</u> lights each of <u>16</u>	candle power requiring a total current of	<u>6.3</u>	Amperes
E	<u>14</u> lights each of <u>16</u>	candle power requiring a total current of	<u>9.8</u>	Amperes
1	Mast head light with <u>1</u> lamps each of <u>32</u>	candle power requiring a total current of	<u>1.3</u>	Amperes
Two	Side light with <u>1</u> lamps each of <u>32</u>	candle power requiring a total current of	<u>2.6</u>	Amperes
Two	Cargo lights of <u>6</u> lights each <u>16</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. No arc lights
 Where are the switches controlling the masthead and side lights placed chart room

DESCRIPTION OF CABLES.

Main cable carrying	<u>60</u> Amperes, comprised of	<u>19</u> wires, each	<u>16</u> S.W.G. diameter,	<u>.0600</u> square inches total sectional area
Branch cables carrying	<u>10</u> Amperes, comprised of	<u>7</u> wires, each	<u>18</u> S.W.G. diameter,	<u>.0125</u> square inches total sectional area
Branch cables carrying	<u>7</u> Amperes, comprised of	<u>7</u> wires, each	<u>20</u> S.W.G. diameter,	<u>.0070</u> square inches total sectional area
Leads to lamps carrying	<u>2</u> Amperes, comprised of	<u>3</u> wires, each	<u>22</u> S.W.G. diameter,	<u>.0018</u> square inches total sectional area
Cargo light cables carrying	<u>4.2</u> Amperes, comprised of	<u>145</u> wires, each	<u>38</u> S.W.G. diameter,	<u>.0046</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised Rubber insulation. Lead covered wire in the heavy gauge, galvanised & screwed conduit throughout except in Accommodation which is lead covered clipped to wood work

Joints in cables, how made, insulated, and protected No joints
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances no joints 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 none
 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 through galvanised screwed conduit



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002808-002815-0295

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 Galvanised Steel Conduit

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

What special protection has been provided for the cables near boiler casings Galv. steel conduit

What special protection has been provided for the cables in engine room Galv. steel conduit

How are cables carried through beams to lead bushes through bulkheads, &c. Glands

How are cables carried through decks Metal tubes made watertight to deck

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

If so, how are they protected _____

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 large insulated brass terminals

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

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 Switchboard

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 with rubber rings

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.

Campbell & Isherwood Ltd Electrical Engineers Date July 21

COMPASSES.

Distance between dynamo or electric motors and standard compass 90 ft

Distance between dynamo or electric motors and steering compass 90 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>5</u>	Amperes	<u>4</u>	feet from standard compass	feet from steering compass
A cable carrying	<u>6</u>	Amperes	<u>5</u>	feet from standard compass	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 nil degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

Houghton & Co Ltd Builder's Signature. Date 30th July 1921

GENERAL REMARKS.

Managing Director
This installation has been fitted in accordance with the Rules & is of good description.

Fee £5.0.0. Applied for: 23 AUG 1921 A. J. Bassett
Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 23 AUG 1921
Electric Light



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