

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9124

Port of Belfast Date of First Survey 30th April, 1924 Date of Last Survey May 27th 1924 No. of Visits 7

No. in on the ~~boat~~ Steel S.S. Atlantida Port belonging to Ceiba
Req. Book Built at Belfast By whom Workman Clark & Co Ltd When built 1924

Owners Standard Fruit & Steamship Co Owners' Address
Yard No. 472 Electric Light Installation fitted by Sunderland Forge & Engineering Co Ltd When fitted 1924

DESCRIPTION OF DYNAMOS ENGINES ETC.

2 additional generators each of 75 KW fitted 6.35 for refrigeration purposes (R.Os. 4442)
2. Single Cylinder Vertical, Open Type. Steam Engines pressure equal to 100 lbs of steam. 10 lbs. back pressure. direct coupled to
2. Open Type. Compound Wound. Continuous Rated Multipolar Dynamos.

Capacity of Dynamo 168 Amperes at 110 Volts, whether continuous or alternating current continuous.

Where ^{are} Dynamos fixed Engine Room Starboard Aft Whether single or double wire system is used double wire.

Position of Main Switch Board Engine Room Starboard Aft having switches to groups Five of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Navigation in Wheel House 12. Main Deck Section Board 2.

Upper Deck Section Board 10. Smoke Room Port 5. Smoke Room Starboard 5. Dining Saloon Port 6. Dining Saloon Starboard 6.

Lounge Port 6. Lounge Starboard 6. Engine Room 10. Navigation Lights Ind. in Chart Room 5.

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 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 380 arranged in the following groups:—

A Navigation & Police	95 lights each of	15	candle power requiring a total current of	40	Amperes
B Accommodation	120 lights each of	15	candle power requiring a total current of	60	Amperes
C Engine & Boiler Rms	45 lights each of 150 Watt 1/2 Watt & 41. @ 15		candle power requiring a total current of	27	Amperes
D Cargo Fore	57 lights each of	16	candle power requiring a total current of	31.35	Amperes
E Cargo Aft	51 lights each of	16	candle power requiring a total current of	28	Amperes
2. Mast head lights with	1 lamps each of	32	candle power requiring a total current of each	1.2	Amperes
2. Side light with	1 lamps each of	32	candle power requiring a total current of each	1.2	Amperes
16	Cargo lights of each	200	candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. none fitted

Where are the switches controlling the masthead and side lights placed Chart room.

DESCRIPTION OF CABLES.

Main cable carrying	168 Amperes, comprised of	37 wires, each	.083" S.W.G. diameter,	.2 square inches total sectional area
Branch cables carrying	42.4 Amperes, comprised of	19 wires, each	.052" S.W.G. diameter,	.04 square inches total sectional area
Branch cables carrying	60 Amperes, comprised of	19 wires, each	.061" S.W.G. diameter,	.06 square inches total sectional area
	27	7	.064" S.W.G. diameter,	.0225
Leads to lamps carrying	1.8 Amperes, comprised of	3 wires, each	.029" S.W.G. diameter,	.002 square inches total sectional area
Cargo light cables carrying	3.5 Amperes, comprised of	70 wires, each	.0076" S.W.G. diameter,	.003 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper conductors insulated with pure & vulcanised India rubber Braided & compounded overall and drawn through screwed conduit throughout ship

Joints in cables, how made, insulated, and protected None made

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

Are there any joints in or branches from the cable leading from dynamo to main switch board Nil.

How are the cables led through the ship, and how protected V.I.R. Cable drawn through screened conduit.

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
V.I.R. Cable drawn through screwed conduit.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *V.I.R. cable drawn through screwed conduit.*

What special protection has been provided for the cables near boiler casings *V.I.R. cable drawn through screwed conduit.*

What special protection has been provided for the cables in engine room *V.I.R. cable drawn through screwed conduit.*

How are cables carried through beams *screwed conduit* through bulkheads, &c. *screwed conduit.*

How are cables carried through decks *screwed conduit.*

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

If so, how are they protected *screwed conduit.*

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 *4 Bar C.I. Guards mounted on Wood Blocks. Terminals enclosed in fitting.*

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

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 *in W/T. Boxes.*

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 ² *2* voltmeters *Yes*, and with ² *2* amperemeters *Yes*, fixed at *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

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.

THE SUNDERLAND FORGE & ENG. CO. LTD., *Thompson* Electrical Engineers Date *30th May 1924.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *10 feet.*

Distance between dynamo or electric motors and steering compass *105 feet.*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>6</i>	Amperes	<i>9</i>	feet from standard compass	<i>7</i>	feet from steering compass
A cable carrying	<i>3</i>	Amperes	<i>3</i>	feet from standard compass	<i>3</i>	feet from steering compass
A cable carrying	<i>2</i>	Amperes	<i>2</i>	feet from standard compass	<i>2</i>	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 *all* course in the case of the standard compass and *no* degrees on *all* course in the case of the steering compass.

W. St. Aubert Builder's Signature. Date *26.5.24.*

PRO WORKMAN, CLARK & CO., LIMITED, ASSISTANT SECRETARY.

GENERAL REMARKS.

This installation is well fitted in accordance with the Rules, and gave satisfactorily on trial under full load.

See in Deck. 1st Entry Report.

Wm. St. Aubert Surveyor to Lloyd's Register of Shipping.

13/6/24.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



21m.11.10—Transfer.