

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4891

Port of Hong Kong Date of First Survey Nov. 12th. Date of Last Survey Dec. 12th. No. of Visits 4
 in on the ~~Iron~~ Steel Sc. Sr. "AMBATIELOS" ex "WAR TROOPER" Port belonging to Argostoli
 Book Hong Kong Built at Hong Kong By whom Hong Kong & Whampoa Dock Co. When built 1919
 ers Evangelos E. Ambatielos Owners' Address Argostoli, Greece
 l No. 564 ex The Shipping Controller Electric Light Installation fitted by Hong Kong & Whampoa Dock Co. Ltd. When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

10 K.W. Multipolar compound wound dynamo direct coupled to a single cylinder steam engine working on 180 lbs. steam pressure.
 Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Starboard Side Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board Starb. Side Engine Room having switches to groups Five of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each None

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
 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, Porcelain & Slate

Total number of lights provided for 153 arranged in the following groups:—

| | | | | | |
|------------------------|-------------------|---------|--|--------------|---------|
| Cargo Clusters | 30 lights each of | 16 | candle power requiring a total current of | 15 | Amperes |
| | 32 lights each of | 16 | candle power requiring a total current of | 16 | Amperes |
| | lights each of | | candle power requiring a total current of | | Amperes |
| | 73 lights each of | 16 & 32 | candle power requiring a total current of | 17 | Amperes |
| | 9 lights each of | 16 & 32 | candle power requiring a total current of | 7 | Amperes |
| 2 Mast head light with | 1 lamps each of | 32 | candle power requiring a total current of | 2 | Amperes |
| 2 Side light with | 1 lamps each of | 32 | candle power requiring a total current of | 2 | Amperes |
| 51 Cargo lights of | | 96 | candle power, whether incandescent or arc lights | Incandescent | |

For arc lights, what protection is provided against fire, sparks, &c. None

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

| | | | | |
|-----------------------------|--------------------------|-----------------|---------------------|---|
| Main cable carrying | 54 Amperes, comprised of | 19 wires, each | 14 S.W.G. diameter, | 0.0976 square inches total sectional area |
| Branch cables carrying | 17 Amperes, comprised of | 7 wires, each | 16 S.W.G. diameter, | 0.0229 square inches total sectional area |
| Branch cables carrying | 16 Amperes, comprised of | 7 wires, each | 18 S.W.G. diameter, | 0.0129 square inches total sectional area |
| Leads to lamps carrying | 1 Amperes, comprised of | 1 wires, each | 16 S.W.G. diameter, | 0.0032 square inches total sectional area |
| Cargo light cables carrying | 3 Amperes, comprised of | 108 wires, each | 38 S.W.G. diameter, | 0.0032 square inches total sectional area |

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables and wire are insulated with pure para rubber, two coats of vulcanising rubber and a layer of india rubber coated rubber tape and the whole vulcanised together and mechanically protected by lead or galvanised iron wire armour.

Joints in cables, how made, insulated, and protected Made in suitable junction boxes.

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

Are there any joints in or branches from the cable leading from dynamo to main switch board None

How are the cables led through the ship, and how protected Cables protected by galvanised iron wire armour.



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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 Lead covered or armoured

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Galvanised iron armoured

What special protection has been provided for the cables near boiler casings Galvanised iron Armoured

What special protection has been provided for the cables in engine room Galvanised iron armoured

How are cables carried through beams Cable protected by armour through bulkheads, &c. in watertight glands

How are cables carried through decks In galvanised iron or brass 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 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 -

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 Main Switch 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.

Electrical Engineers

Date Dec. 20th. 1919

COMPASSES.

Distance between dynamo or electric motors and standard compass 100 feet.

Distance between dynamo or electric motors and steering compass 96 feet

The nearest cables to the compasses are as follows:—

| Cable carrying | Amperes | feet from standard compass | feet from steering compass |
|---------------------------|-----------|----------------------------|----------------------------|
| A cable carrying <u>7</u> | <u>15</u> | <u>8</u> | <u>8</u> |
| A cable carrying <u>5</u> | <u>24</u> | <u>20</u> | <u>20</u> |
| A cable carrying <u>-</u> | <u>-</u> | <u>-</u> | <u>-</u> |

Have the compasses been adjusted with and without the electric installation at work at full power -

The maximum deviation due to electric currents, etc., was found to be - degrees on - course in the case of the standard compass and - degrees on - course in the case of the steering compass.

Builder's Signature. Date Dec. 20th. 1919.

GENERAL REMARKS. Installation tested on December 12th. 1919 with good result.

It is submitted that this vessel is eligible for THE RECORD. ELEC. LIGHT 26/2/20

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 27 FEB 1920

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.