

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4675

Port of _____ Date of First Survey _____ Date of Last Survey _____ No. of Visits _____
 No. in Reg. Book _____ on the Iron or Steel *British Colonel* Port belonging to _____
 Built at *Sunderland* By whom *Messrs. Sir James Langhorne* When built *1921*
 Owners *British Tanker Co.* Owners' Address _____
 Yard No. *626* Electric Light Installation fitted by *The Sunderland Forge & Eng. Co. Ltd.* When fitted *1921*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

*One of our container plants consisting of single cylinder vertical steam engine 8x6 100 H.P. steam 340 revs
 under 16x6 Dynamo. also 1 motor generator by the no. Tickers 10 KW (supplied from main Alternators)*

Capacity of Dynamo *91* Amperes at *110* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *In Engine room aft end Refug. Platform* Whether single or double wire system is used *Double*

Position of Main Switch Board *Aft end Refug. Platform in Eng. room* having switches to groups *Five* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *in chart room with switches controlling
 Foremast, Mainmast, Port, Starboard, Stern, Masts, Compasses & Telegraphs & clear over
 screen lights*

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 *211 @ 16 CP* arranged in the following groups:—

A <i>Salon, Port Navigation</i>	<i>12</i> lights each of	<i>16</i>	candle power requiring a total current of	<i>62.4</i>	Amperes
B <i>Aft Accommodation</i>	<i>48</i> lights each of	"	candle power requiring a total current of	<i>25.0</i>	Amperes
C <i>Boiler Room</i>	<i>12</i> lights each of	"	candle power requiring a total current of	<i>6.24</i>	Amperes
D <i>Engine Room</i>	<i>31</i> lights each of	"	candle power requiring a total current of	<i>16.7</i>	Amperes
E <i>Wireless</i>	<i>-</i> lights each of	<i>-</i>	candle power requiring a total current of	<i>-</i>	Amperes
<i>2</i>	Mast head lights with <i>1</i> lamp each of	<i>32 CP</i>	candle power requiring a total current of	<i>2.08</i>	Amperes
<i>4</i>	Side lights with <i>1</i> lamp each of	<i>32 CP</i>	candle power requiring a total current of	<i>4.16</i>	Amperes

2 Cargo lights of *6 - 16 CP* candle power, whether incandescent or arc lights *Incandescent.*
4 - 300 watt - 1/2 watt lamps each of 4.5 amp. also 3 - 100 watt - 1/2 watt lamps each of .91 amp.

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

None fitted

Where are the switches controlling the masthead and side lights placed *In chart room on Navigation light indicator.*

DESCRIPTION OF CABLES.

Main cable carrying	<i>91</i> Amperes, comprised of	<i>19</i> wires, each	<i>.083</i> S.W.G. diameter,	<i>.1000</i> square inches total sectional area
Branch cables carrying	<i>62.6</i> Amperes, comprised of	<i>19</i> wires, each	<i>.064</i> S.W.G. diameter,	<i>.0600</i> square inches total sectional area
Branch cables carrying	<i>11.9</i> Amperes, comprised of	<i>7</i> wires, each	<i>.036</i> S.W.G. diameter,	<i>.0070</i> square inches total sectional area
Leads to lamps carrying	<i>1.56</i> Amperes, comprised of	<i>3</i> wires, each	<i>.029</i> S.W.G. diameter,	<i>.0020</i> square inches total sectional area
Cargo light cables carrying	<i>3.11</i> Amperes, comprised of	<i>3</i> wires, each	<i>.029</i> S.W.G. diameter,	<i>.0020</i> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Mains Machinery Spaces: Pure Silk, I.R., Jute, Vulcanized Rubber Lead covered, Armoured & Braided
Accommodation: " " " " " Lead covered.

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 *-* 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 *None made.*

How are the cables led through the ship, and how protected *Trough filled with Bitumen under gangway.*

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, Armoured & Braided

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered Armoured & Braided

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 Absor bucket with Jitro through bulkheads, &c. W.P. Glants

How are cables carried through decks W.P. Jute Tubes

Are any cables run through coal bunkers — or cargo spaces — or spaces which may be used for carrying cargo, stores, or baggage —

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 —

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 both on light and 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 2500 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.

p.pro THE SUNDERLAND FORGE & ENGINEERING CO. LTD

COMPASSES.

Distance between dynamo or electric motors and standard compass 30 ft

Distance between dynamo or electric motors and steering compass 290 "

The nearest cables to the compasses are as follows:—

Cable	Amperes	Distance from standard compass	Distance from steering compass
A cable carrying <u>11.9</u>	<u>20</u>	<u>20 feet</u>	<u>10 feet</u>
A cable carrying <u>.52</u>	<u>60</u>	<u>into</u>	<u>10 feet</u>
A cable carrying <u>.52</u>	<u>10</u>	<u>into</u>	<u>into</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.

GENERAL REMARKS.

This electric lighting installation has been verified and found conform A trial has been made and the work found in good order

It is estimated that this vessel is capable of carrying 100 tons of cargo.

See £3.31

Committee's Minute

22/9/21

Surveyor to Lloyd's Register of Shipping.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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