

# 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 contract plants consisting of single cylinder vertical steam engine 8x6 100 H.P. steam 340 revs  
 coupled to 16x6 Dynamo. also 1 motor generator by the no. - tubes 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. Deck Whether single or double wire system is used Double

Position of Main Switch Board Aft end Refug. Deck 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 view 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	Saloon, Deck, Navigation	12 lights each of	16	candle power requiring a total current of	62.4	Amperes
B	Aft Accommodation	48 lights each of	"	candle power requiring a total current of	25.0	Amperes
C	Boiler Room	12 lights each of	"	candle power requiring a total current of	6.24	Amperes
D	Engine Room	31 lights each of	"	candle power requiring a total current of	16.7	Amperes
E	Wireless	- lights each of	-	candle power requiring a total current of	-	Amperes
2	Mast head lights with	1 lamp each of	32 CP	candle power requiring a total current of	2.08	Amperes
4	Side lights with	1 lamp each of	32 CP	candle power requiring a total current of	4.16	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	91 Amperes, comprised of	19 wires, each	.083 S.W.G. diameter,	.1000 square inches total sectional area
Branch cables carrying	62.6 Amperes, comprised of	19 wires, each	.064 S.W.G. diameter,	.0600 square inches total sectional area
Branch cables carrying	11.9 Amperes, comprised of	7 wires, each	.036 S.W.G. diameter,	.0070 square inches total sectional area
Leads to lamps carrying	1.56 Amperes, comprised of	3 wires, each	.029 S.W.G. diameter,	.0020 square inches total sectional area
Cargo light cables carrying	3.1 Amperes, comprised of	3 wires, each	.029 S.W.G. diameter,	.0020 square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

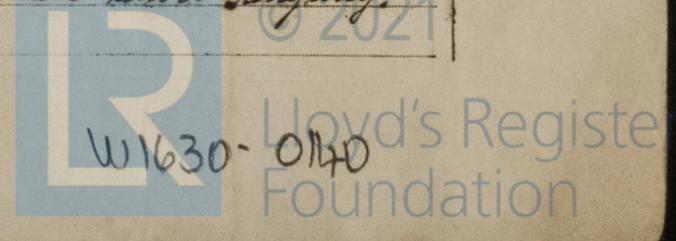
Mains & Machinery Spans: Pure Silk, I.R., Jute, Sulcanite, Hard Lead covered, Armoured & Braided  
 Accommodation: " " " " " Lead covered.

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 Troughs fitted with Putty under gangways.



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

How are cables carried through decks W.P. Deck Jitro

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 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 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

[Signature] Director. Electrical Engineers Date 13th September 1921.

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 30ft

Distance between dynamo or electric motors and steering compass 290 "

The nearest cables to the compasses are as follows:—

A cable carrying <u>11.9</u> Amperes	<u>20 feet</u> feet from standard compass	<u>10 feet</u> feet from steering compass
A cable carrying <u>.52</u> Amperes	<u>led into</u> <del>from</del> standard compass	<u>10</u> feet from steering compass
A cable carrying <u>.52</u> Amperes	<u>10</u> feet from standard compass	<u>led into</u> <del>from</del> steering compass

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 —

**GENERAL REMARKS.**

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

150,110—Transfer.

It is estimated that this vessel is eligible for THE RECORD. Elec Light

Rock 22/9/21

[Signature] Surveyor to Lloyd's Register of Shipping.

See £3.31

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.