

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 23

Port of Port Arthur Date of First Survey 5/11/17 Date of Last Survey 26/11/17 No. of Visits 12  
 No. in Reg. Book on the ~~Iron or~~ Steel Single Screw Steamer "Wm. Dancy" Port belonging to Port Arthur  
 Built at Port Arthur Out By whom Port Arthur Shipbuilding Co. Ltd. When built 1917  
 Owners Imperial Munitions Board Owners' Address Ottawa  
 Yard No. 18 Electric Light Installation fitted by Port Arthur Shipbuilding Co. Ltd. When fitted 1917

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Enberg 7 1/2 K.W. generator direct connected to an Enberg Vertical Engine 52 1/2 R.P.M.

Capacity of Dynamo 68 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Star. Lower engine room Whether single or double wire system is used double

Position of Main Switch Board " having switches to groups 15 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each "1 port hallway, midship cabin, "2 starboard hallway, midship cabin, "3 hallway in crews quarters aft under poop deck.

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 25% 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 No wire fuses

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 161 arranged in the following groups:—

A	after Cabin 4 lights each of	16	candle power requiring a total current of	12	Amperes
B	Port Cabin 4 2 lights each of	16	candle power requiring a total current of	12	Amperes
C	Star. Cabin 28 lights each of	16	candle power requiring a total current of	12	Amperes
D	binders 9 lights each of	16	candle power requiring a total current of	4	Amperes
E	Cargo lights 16 lights each of	16	candle power requiring a total current of	8	Amperes
	2 Mast head light with 2 lamps each of	32	candle power requiring a total current of	2	Amperes
	2 Side light with 2 lamps each of	32	candle power requiring a total current of	2	Amperes
	4 Cargo Cluster Cargo lights of 4 lights each	16	candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. Cargo Clusters with guards.

Where are the switches controlling the masthead and side lights placed Pilot house on Tell Tale board.

## DESCRIPTION OF CABLES.

Main cable carrying	68 Amperes, comprised of	7 wires, each	"10 S.W.G. diameter,	66370 square inches total sectional area
Branch cables carrying	12 Amperes, comprised of	7 wires, each	"18 S.W.G. diameter,	10380 square inches total sectional area
Branch cables carrying	16 Amperes, comprised of	7 wires, each	"18 S.W.G. diameter,	10380 square inches total sectional area
Leads to lamps carrying	4 Amperes, comprised of	1 wires, each	"14 S.W.G. diameter,	4170 square inches total sectional area
Cargo light cables carrying	4 Amperes, comprised of	1 wires, each	"14 S.W.G. diameter,	4170 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

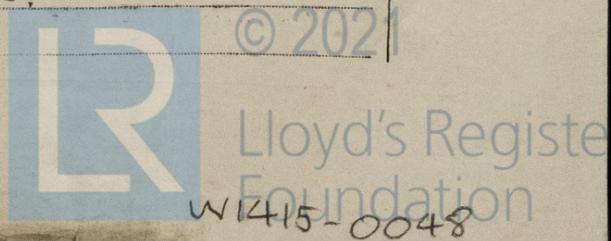
Rubber covered wires and cables 3/32" rubber insulation and double braid, in galvanized steel conduit.

Joints in cables, how made, insulated, and protected made in junction boxes mechanically secure, soldered, taped with rubber and friction tape and painted with insulating paint

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 No

How are the cables led through the ship, and how protected galvanized steel 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 galvanized steel conduit.

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

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

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

How are cables carried through beams In galvanized steel conduit through bulkheads, &c. steel conduit

How are cables carried through decks In steel 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 Steel Conduit

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage 2 lamps in store room.

If so, how are the lamp fittings and cable terminals specially protected in Conduit and vapor proof fixtures.

Where are the main switches and fuses for these lights fitted In Conduit in starboard hall, midship cabin.

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 Connected to receptacles on deck

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel No

How are the returns from the lamps connected to the hull 2 wire system.

Are all the joints with the hull in accessible positions None

Is the installation supplied with a voltmeter yes and with an amperemeter yes, fixed on 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.

**COMPASSES.**

J. J. Raige Gen. Manager Electrical Engineers Date 26/11/17

Distance between dynamo or electric motors and standard compass 45 ft

Distance between dynamo or electric motors and steering compass 35 ft

The nearest cables to the compasses are as follows:—

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

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.**

J. J. Raige Gen. Manager Builder's Signature. Date 26/11/17

Installation completed on the 26<sup>th</sup> day of Nov. 1917 and tested clear after 24 hours running test. The workmanship and materials are good. It is submitted that this vessel is eligible for THE RECORD. Elec. light. J. W. D. 24/4/18. Surveyor to Lloyd's Register of Shipping.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Lloyd's Register

