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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 on the ~~Iron~~ Steel Single Screw Steamer "Wm. Dancy" Port belonging to Port Arthur
Reg. Book 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 7½ K.W. generator direct connected to an Enberg Vertical Engine
525 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
loop 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

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 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 Windows 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.



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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 *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 Conduits.*

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

How are cables carried through beams *In galvanized steel conduits* through bulkheads, &c. *steel Conduits.*

How are cables carried through decks *In steel conduits.*

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
A cable carrying	Amperes	feet from standard compass	feet from steering compass
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 26th 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. *JWR* 24/4/18. *Robert Conn* Surveyor to Lloyd's Register of Shipping.