

March 15, 1917

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2055

Port of Baltimore Date of First Survey Nov 6, 1916 Date of Last Survey 24th Feb/17 No. of Visits 12
 No. in 44 on the Iron or Steel Motor Vessel "Holden Evans" Port belonging to Wilmington Del.
 Reg. Book 44 Suff. Built at Baltimore Md. By whom Baltimore D.D. & S.B. Co When built 1917
 Owners Continental Transp. & Oil Co. Owners' Address Richmond Va.
 Yard No. 76 Electric Light Installation fitted by J. M. Lucas Co., Baltimore. When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

In August 1943 the vessel had a 6 kw steam set (date of fitting not known) and in Sept. a 7 kw oil set was fitted giving 30 kw in all.
 Two generating sets each rated at 10 K.W. direct coupled to reciprocating engines 7" x 6" x 450 Revs.

Capacity of Dynamo 87 Amperes at 115 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Upper Engine Room. Whether single or double wire system is used Double
 Position of Main Switch Board near Dynamo having switches to groups 5 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Windlass Room, 6. Starboard side poop - 8
Port side poop - 8

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 Yes.

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

Total number of lights provided for 220 arranged in the following groups:—

A	40	lights each of	20	candle power requiring a total current of	9.1	Amperes
B	75	lights each of	20	candle power requiring a total current of	17.0	Amperes
C	45	lights each of	20	candle power requiring a total current of	17.0	Amperes
D	20	lights each of	20	candle power requiring a total current of	4.5	Amperes
E		lights each of		candle power requiring a total current of		Amperes
2	Mast head light with	2	lamps each of	48	candle power requiring a total current of	2.8
2	Side light with	1	lamps each of	48	candle power requiring a total current of	1.1
4	cluster	Cargo lights of	20	candle power, whether incandescent or arc lights	incandescent	

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

Where are the switches controlling the masthead and side lights placed on tell tale in Pilot House.

DESCRIPTION OF CABLES.

Main cable carrying	91	Amperes, comprised of	19	wires, each	14	S.W.G. diameter,	.098	square inches total sectional area
Branch cables carrying	18	Amperes, comprised of	7	wires, each	16	S.W.G. diameter,	.021	square inches total sectional area
Branch cables carrying	9.1	Amperes, comprised of	7	wires, each	18	S.W.G. diameter,	.013	square inches total sectional area
Leads to lamps carrying	3	Amperes, comprised of	1	wires, each	14	S.W.G. diameter,	.005	square inches total sectional area
Cargo light cables carrying	1.4	Amperes, comprised of	19	wires, each	26	S.W.G. diameter,	.005	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Wires covered with $\frac{3}{32}$ pure gum, insulating tape, jute filler & bound with insulating tape. All wiring except in quarters led through enamel lined galvanized piping

Joints in cables, how made, insulated, and protected Spliced, soldered, taped with pure gum, and waterproof tape and coated with insulating compound.

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 In iron pipes enamel lined.



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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 *In iron conduits*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *" " "*

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 *In iron conduits* through bulkheads, &c. *with stuffing boxes*

How are cables carried through decks *In iron conduits with stuffing boxes*

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

If so, how are they protected *In iron conduits close to deck*

Are any lamps fitted in ~~coal bunkers~~ or spaces which may at times be used for cargo, ~~stores~~, or baggage *Yes*

If so, how are the lamp fittings and cable terminals specially protected *In watertight fixtures with metal guards*

Where are the main switches and fuses for these lights fitted *Poop switch board*

If in the spaces, how are they specially protected *None in spaces*

Are any switches or fuses fitted in bunkers *Yes*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *Yes*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Yes*

How are the returns from the lamps connected to the hull *Yes*

Are all the joints with the hull in accessible positions *Yes*

Is the installation supplied with a voltmeter *Yes* and with an amperemeter *for each dynamo 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 *Yes*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *No*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *In watertight fixtures with metal guards*

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

COMPASSES.

Distance between dynamo or electric motors and standard compass *50 ft*

Distance between dynamo or electric motors and steering compass *50 ft*

The nearest cables to the compasses are as follows:—

Cable	Amperes	Feet from standard compass	Feet from steering compass
A cable carrying <i>1 1/2</i>	<i>3</i>	<i>3</i>	
A cable carrying <i>1/4</i>	<i>1</i>	<i>1</i>	
A cable carrying <i>✓</i>	<i>✓</i>	<i>✓</i>	

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

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

BALTIMORE DRY DOCKS & SHIP BUILDING CO.

Builder's Signature.

Date

GENERAL REMARKS.

This installation has been fitted in an efficient manner. The workmanship & materials are good and in accordance with the Rules of this Society. The generators have been tried under full load and found satisfactory. Side & mast head lights tested.

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

J.W.D. 12/4/17

Surveyor to Lloyd's Register of British and Foreign Shipping.

New York MAR 22 1917

Committee's Minute

Elec. Light



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