

1 DEC 1928

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 430

Port of Cleveland, O. Date of First Survey June 4 Date of Last Survey Sept 6 No. of Visits about 30
 No. in Book 1053 on the Iron or Steel Yankee "MARTHA E. ALLEN" Port belonging to Whiting Ind.
 Built at Coswin Ohio By whom American Shipbuilding Co. When built 1925
 Owners Lake Tankers Corporation Owners' Address Whiting Ind. When fitted 1928
 Ord No. 803 Electric Light Installation fitted by American Shipbuilding Co.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

These are three generators: 1- 45 KW. High generator coupled to auxiliary Westport 323 amps. 220 volts. 1- 10 KW. Sunderland large generator engine, steam. 91 amps. 110 volts. 1- Kromhout generator + oil engine, 91 amps. 110 volts.

Capacity of Dynamo ✓ Amperes at ✓ Volts, whether continuous or alternating current A.C. ✓
 Where is Dynamo fixed Lower motor room Port 1 Starb. Whether single or double wire system is used Double ✓
 Position of Main Switch Board Lower motor room Having switches to groups 16 branch circuits of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Yard. Quarters main deck. After Quarters fore deck. Engine room & to motors in motor room, etc.

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 Cartridge fuses

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

Total number of lights provided for about 215 arranged in the following groups:—

A	<u>41</u>	lights each of <u>30-25W + 11-40W</u> candle power requiring a total current of <u>17</u> Amperes
B	<u>29</u>	lights each of <u>19-25W + 10-40W</u> candle power requiring a total current of <u>10.5</u> Amperes
C	<u>45</u>	lights each of <u>32-25W + 10-40W</u> candle power requiring a total current of <u>14</u> Amperes
D	<u>43</u>	lights each of <u>29-25W + 13-40W</u> candle power requiring a total current of <u>9.6</u> Amperes
E	<u>57</u>	lights each of <u>6-25W + 47-40W</u> candle power requiring a total current of <u>22</u> Amperes
1	Mast head light with <u>2</u> lamps each of <u>60</u> candle power requiring a total current of <u>1</u> Amperes	
2	Side light with <u>2</u> lamps each of <u>60</u> candle power requiring a total current of <u>2</u> Amperes	
✓	Cargo lights of <u>✓</u> candle power, whether incandescent or arc lights <u>✓</u>	

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

Where are the switches controlling the masthead and side lights placed Pilot House

DESCRIPTION OF CABLES.

Main cable carrying	<u>91</u> Amperes, comprised of <u>19</u> wires, each <u>13502</u> S.W.G. diameter, <u>8357</u> square inches total sectional area
Branch cables carrying	<u>22</u> Amperes, comprised of <u>19</u> wires, each <u>2190</u> S.W.G. diameter, <u>4114</u> square inches total sectional area
Branch cables carrying	<u>3.6</u> Amperes, comprised of <u>4</u> wires, each <u>1489</u> S.W.G. diameter, <u>10429</u> square inches total sectional area
Leads to lamps carrying	<u>3</u> Amperes, comprised of <u>4</u> wires, each <u>585</u> S.W.G. diameter, <u>4099</u> square inches total sectional area
Cargo light cables carrying	<u>Amperes</u> , comprised of <u>wires</u> , each <u>S.W.G. diameter</u> , <u>square inches</u> total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

all wires used for lighting, power & telephone circuits are lead & armoured covered, & are made according to the specifications of the United Navy, Bulletin 15 C & E

Joints in cables, how made, insulated, and protected No joints or splices in main cables. Where required in branch cables they are soldered & taped.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances No 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 Where subject to damage they are fitted in conduits, otherwise secured by cable clamps spaced 10 apart

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 *Fitted in conduits*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *No cables installed where such conditions exist*

What special protection has been provided for the cables near boiler casings *Fitted in conduits*

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

How are cables carried through beams *Bushed* through bulkheads, &c. *w.y. fittings*

How are cables carried through decks *w.y. fittings*

Are any cables run through coal bunkers ☒ or cargo spaces *No* or spaces which may be used for carrying cargo, stores, or baggage *No*

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 *None.* 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 *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 *Lamps & fittings gas tight.*

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 _____ 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.

The American Ship Building Co. Electrical Engineers Date *Nov. 6-28*

COMPASSES.

Distance between dynamo or electric motors and *Pilot House* standard compass *about 300 ft.*

Distance between dynamo or electric motors and *after* steering compass *about 50 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.

The American Ship Bldg Co. Builder's Signature. Date *Nov 6-28*

GENERAL REMARKS.

The above installation has been fitted on board in a satisfactory manner. The quality of the materials used, & the workmanship is good. The installation has been tried out under working conditions & found in order.

See #157-10 *THE RECORD* *Ed. 10-12-28* *Elec. light* *5/12/28* *G. Drummond* Surveyor to Lloyd's Register of Shipping.

Committee's Minute. NEW YORK NOV 21 1928

"Elec. light"



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