

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 1053 on the Iron or Steel Tanker "MARTHA E. ALLEN" Port belonging to Whiting Ind.
 Book 1053 Built at Lorain Ohio By whom American Shipbuilding Co When built 1925
 Owners Lake Tankers Corporation Owners' Address Whiting Ind.
 Ord No. 803 Electric Light Installation fitted by American Shipbuilding Co. When fitted 1928

DESCRIPTION OF DYNAMO, ENGINE, ETC. *These are three generators - 1- 45 KW. high speed 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 & Starboard Whether single or double wire system is used Double ✓
 Position of Main Switch Board Lower motor room Yard 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 :-

Group	Description	Watts	Amperes
A	71 lights each of 30-25W + 11-40W	2170	17
B	29 lights each of 19-25W + 10-40W	1050	10.5
C	45 lights each of 32-25W + 10-40W	1425	14
D	43 lights each of 29-25W + 13-40W	1260	9.6
E	57 lights each of 6-25W + 47-40W	2220	22
1	Mast head light with 2 lamps each of 60 candle power	60	1
2	Side light with 2 lamps each of 60 candle power	60	2
	Cargo lights of <input checked="" type="checkbox"/>		

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.

Category	Amperes	Wires	S.W.G. diameter	square inches total sectional area
Main cable carrying	91	19	13502	83577
Branch cables carrying	22	19	2190	4114
Branch cables carrying	3.6	4	1489	10429
Leads to lamps carrying	3	4	585	4099
Cargo light cables carrying				

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
J. J. [unclear]

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 <u>55</u> Amperes	<u>8.</u> 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
J. J. [unclear]

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 hd. 10 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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