

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4081

Port of Philadelphia Date of First Survey June 10 1920 Date of Last Survey Jan 3 1921 No. of Visits 33
 No. in Reg. Book on the ~~Iron~~ Steel S.S. SUNOCO Port belonging to Antwerp
 Built at Brester By whom Sun Shipbuilding Co When built 1921
 Owners Societe d'Armenement d'Industrie et de Commerce Owners' Address Antwerp
 Yard No. 45 Electric Light Installation fitted by Sun Shipbuilding Co When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two G.E. Compound-wound Continuous Current Generators direct connected to two G.E. Vertical Engines

Capacity of Dynamo 136 Amperes at 115 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Opp. Engine Room platform Whether single or double wire system is used Double
 Position of Main Switch Board Opp. in Dynamometer Room having switches to groups Two of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One six circuit-panel box in Bridge House, one six circuit-panel box in Engine Room casing, & one six circuit-panel box in Dynamometer Platform
 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 100 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 (Steel)

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

A	Bridge House	45 lights each of	32	candle power requiring a total current of	15	Amperes
B	After "	60 lights each of	32	candle power requiring a total current of	18	Amperes
C	Engine Room	50 lights each of	32	candle power requiring a total current of	15	Amperes
D	Pump Room	16 lights each of	32	candle power requiring a total current of	5	Amperes
E	Deck Forecastle	30 lights each of	32	candle power requiring a total current of	9	Amperes
	4 Mast head light with	2 lamps each of	40	candle power requiring a total current of	1	Amperes
	2 Side light with	2 lamps each of	40	candle power requiring a total current of	1	Amperes
	36 Cargo lights of		16	candle power, whether incandescent or arc lights	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed on telt tale panel in Deck House

DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of Two wires, each 000 S.W.G. diameter, 0.132 square inches total sectional area
 Branch cables carrying 15 Amperes, comprised of " wires, each 5 S.W.G. diameter, 0.0130 square inches total sectional area
 Branch cables carrying 47 Amperes, comprised of " wires, each 6 S.W.G. diameter, 0.0521 square inches total sectional area
 Leads to lamps carrying 4 Amperes, comprised of " wires, each 14 S.W.G. diameter, 0.00323 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of " wires, each 16 S.W.G. diameter, 0.00203 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All galvanized Conduit used, made water-tight going through bulkheads
All wire clad in Engine & Fire Rooms asbestos covered, all other wire rubber covered. Wire larger than #10 stranded

Joints in cables, how made, insulated, and protected All joints are well made mechanically then soldered and wrapped with heavy rubber and friction tape

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 galvanized Conduit, made water-tight



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 *Run in galvanized conduits made water-tight*

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

What special protection has been provided for the cables near boiler casings *Asbestos covered*

What special protection has been provided for the cables in engine room *Asbestos covered*

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

How are cables carried through decks *galvanized 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 *galvanized conduit made water-tight*

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

If so, how are the lamp fittings and cable terminals specially protected *In water-tight lamp fixtures*

Where are the main switches and fuses for these lights fitted *In Piddle Hatch*

If in the spaces, how are they specially protected *In water-tight fixtures*

Are any switches or fuses fitted in bunkers *No*

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

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 *on switchboard*

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 *Screw-floke & rubber gasket*

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.

Robert H. Hall

Electrical Engineers

Date *12-1-21*

COMPASSES.

Distance between dynamo or electric motors and standard compass *250 ft.*

Distance between dynamo or electric motors and steering compass *250 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>35</i>	Amperes	<i>10</i>	feet from standard compass	<i>14</i>	feet from steering compass
A cable carrying	<i>2</i>	Amperes	<i>5</i>	feet from standard compass	<i>5</i>	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 *Yes*

The maximum deviation due to electric currents, etc., was found to be *1/2* degrees on *all* course in the case of the standard compass and *1/2* degrees on *all* course in the case of the steering compass.

Robert H. Hall

Builder's Signature.

Date *12-1-21*

GENERAL REMARKS.

This installation has been well fitted aboard and proved satisfactory under trial

It is submitted that this vessel is eligible for THE RECORD. Elec Light Bell 8/2/21

J. Adamson

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York JAN 18 1921

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



© 2020

Lloyd's Register Foundation