

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1682

Port of Newport News Date of First Survey March 27<sup>th</sup> Date of Last Survey Sept 7<sup>th</sup> No. of Visits 4  
 No. in on the Iron or Steel S.S. "F. D. FISCHER" Port belonging to NEWPORT NEWS  
 Reg. Book 4 Built at Newport News Va By whom Newport News S.S. & T. Co. When built 1918/12  
 Owners Standard Oil Co. of N.J. Owners' Address New York (26 Broadway)  
(U.S. S. B. FLEET (G.R.P.))  
 Yard No. 209 Electric Light Installation fitted by Newport News S.S. & T. Co. When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two sets:- General Electric Co's Marine Type 20 H.P. Dynamos  
direct connected to 9"x7" Vertical Engines  
 Capacity of Dynamo each:- 82 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed After end of Engine Room Whether single or double wire system is used Double  
 Position of Main Switch Board near Dynamos having switches to groups nine of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Quarters Apt:- 8 switches  
Bridge Quarters 2:- 6 switches

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

Total number of lights provided for 274 arranged in the following groups:-  

A	<u>79</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>30.5</u>	Amperes		
B	<u>34</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>4.5</u>	Amperes		
C	<u>29</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>20.0</u>	Amperes		
D	<u>22</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>11.0</u>	Amperes		
E		lights each of		candle power requiring a total current of		Amperes		
	<u>2</u>	Mast head light with	<u>2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>1</u>	Amperes
	<u>2</u>	Side light with	<u>2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
	<u>16</u>	Cargo lights of	<u>16</u>	candle power, whether incandescent or arc lights	<u>INCANDESCENT</u>			

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

Where are the switches controlling the masthead and side lights placed PILOT HOUSE

## DESCRIPTION OF CABLES.

Main cable carrying 82 Amperes, comprised of 37 wires, each #12 S.W.G. diameter, .300 square inches total sectional area  
 Branch cables carrying 39.5 Amperes, comprised of 19 wires, each #16 S.W.G. diameter, .060 square inches total sectional area  
 Branch cables carrying 14.5 Amperes, comprised of 7 wires, each #16 S.W.G. diameter, .022 square inches total sectional area  
 Leads to lamps carrying 05 Amperes, comprised of 1 wires, each #16 S.W.G. diameter, .0032 square inches total sectional area  
 Cargo light cables carrying 2 Amperes, comprised of 1 wires, each #16 S.W.G. diameter, .0032 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber insulating tape, braided, in iron conduit; W.T. iron boxes; steam tight globes; iron cages in engine + cargo spaces.  
 Joints in cables, how made, insulated, and protected Soldered, Rubber tape in W.T. iron boxes.

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 Iron Conduit - Store Conduit - Conduit - & Moulding in Bridge Quarters

Inboard dynamo removed 5.43 at 11.15  
15-Kw. 110 volts



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 Iron Conduit

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

What special protection has been provided for the cables near boiler casings Iron Conduit

What special protection has been provided for the cables in engine room Iron Conduit

How are cables carried through beams Iron Conduit through bulkheads, &c. Iron Conduit

How are cables carried through decks Iron Conduit W.T. Glands

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 Iron Conduit W.T. Iron braces

Are any lamps fitted in coal bunkers 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 Stem tight globes in Cages

Where are the main switches and fuses for these lights fitted Engine Room Main Switchboard

If in the spaces, how are they specially protected yes

Are any switches or fuses fitted in bunkers no

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 Two, and with an amperemeter one, fixed Main 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 Stem tight globes in Cages

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.

Newport News Shipbuilding & Dry Dock Co.,

COMPASSES.

By

Assistant to the President

Electrical Engineers

Date

Dec 9, 1918

Distance between dynamo or electric motors and standard compass

318 ft

Distance between dynamo or electric motors and steering compass

315 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
$\frac{1}{2}$	4	2	
$\frac{1}{2}$	7	4	

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

degrees on

course in the case of the

standard compass and

degrees on

course in the case of the steering compass.

Newport News Shipbuilding & Dry Dock Co.,

By

Builder's Signature.

Date

Dec 9, 1918

GENERAL REMARKS.

The installation has been fitted under special Survey: the workmanship & protection are good, and render the vessel eligible in my opinion, to be the record "Electric Light" in the Register Book—

It is submitted that this vessel is eligible for THE RECORD. ELEC. LIGHT.

YK

7/1/19

Sur

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec. Lt.

New York DEC 17 1918

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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