

Rpt. 13.

Received at London Office

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 103

Port of Wilmington, N.C. Date of First Survey 24<sup>th</sup> April 20 Date of Last Survey 17<sup>th</sup> July 1920 No. of Visits 12  
 No. in Reg. Book on the Iron or Steel D. D. Nemaha Port belonging to Wilmington, N.C.  
 Built at Wilmington, N.C. By whom George A. Fuller Co. When built 1920  
 Owners U. S. Shipping Board E. I. Corp. Owners' Address  
 Yard No. 1450 Electric Light Installation fitted by George A. Fuller Co. When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 Emberg D.C. Marine Generating Sets Consisting of Emberg Single cycle cylinders, double acting Engine and Emberg Generator on common base.

Capacity of Dynamo 130 Amperes at 115 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starboard side of engine room Whether single or double wire system is used Double

Position of Main Switch Board Engine Room having switches to groups and sub-panels of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Forward deck house 8 circuit, Star Deck House 6 circuit and Poop 4 circuit.

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 None used

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

Total number of lights provided for 223 arranged in the following groups:—

A 4 lights each of 100 Watts candle power requiring a total current of \_\_\_\_\_ Amperes

B 208 lights each of 50 " candle power requiring a total current of \_\_\_\_\_ Amperes

C 6 lights each of 15 " candle power requiring a total current of \_\_\_\_\_ Amperes

D 5 lights each of 10 " candle power requiring a total current of \_\_\_\_\_ Amperes

E \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes

Mast head light with 2 lamps each of 16 candle power requiring a total current of \_\_\_\_\_ Amperes

Side light with 2 lamps each of 16 candle power requiring a total current of \_\_\_\_\_ Amperes

9x4 Cargo lights of 50 Watts candle power, whether incandescent or arc lights

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

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

## DESCRIPTION OF CABLES.

Main cable carrying 120 Amperes, comprised of 2 wires, each 0.0 B.S. S.W.G. diameter, \_\_\_\_\_ square inches total sectional area

Branch cables carrying 20 Amperes, comprised of 2 wires, each 4 B.S. S.W.G. diameter, \_\_\_\_\_ square inches total sectional area

Branch cables carrying 15 Amperes, comprised of 2 wires, each 6 B.S. S.W.G. diameter, \_\_\_\_\_ square inches total sectional area

Leads to lamps carrying 5 Amperes, comprised of 2 wires, each 14 B.S. S.W.G. diameter, \_\_\_\_\_ square inches total sectional area

Cargo light cables carrying 2 Amperes, comprised of 2 wires, each 14 B.S. S.W.G. diameter, \_\_\_\_\_ square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

All wires and cables rubber insulated and enclosed in iron conduits

Joints in cables, how made, insulated, and protected Soldered, wound with rubber and friction tape and shellack

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

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 conduits.



**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible *No main feeders pass through cargo spaces but protected*  
 What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Conduit*  
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Conduit*  
 What special protection has been provided for the cables near boiler casings *Conduit*  
 What special protection has been provided for the cables in engine room *Conduit*  
 How are cables carried through beams *None thus carried* through bulkheads, &c.  
 How are cables carried through decks *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 *In conduits*  
 Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *In midship cargo space & belly deck only*  
 If so, how are the lamp fittings and cable terminals specially protected *In water tight globes.*  
 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 *Portable* 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 */* and with an amperemeter *2* fixed *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  
 How are the lamps specially protected in places liable to the accumulation of vapour or gas *Water tight vapour proof fittings*

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 *200* 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.

*George A. Fuller Co.*  
*Luigi Corius Vice Pres* Electrical Engineers Date *Aug 2nd 1920*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *125'-0"*  
 Distance between dynamo or electric motors and steering compass *115'-0"*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>20</i>	<i>25</i>		

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.

*George A. Fuller Co.*  
*Luigi Corius Vice Pres* Builder's Signature. Date *Aug 2nd 1920*

**GENERAL REMARKS.**

*This vessel has been fitted with an electric light installation as above, and the workmanship is good. On completion it was tried under full working conditions and found satisfactory.*

*It is submitted that this vessel is eligible for THE RECORD. Elec Lt. Rell, 19/100 Elec Lt.*  
*Geo. Allan*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York AUG 31 1920



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

2m.11.19.—Transfer.