

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 4585

Port of Philadelphia Date of First Survey Oct 10th 1921 Date of Last Survey Nov 24th No. of Visits 14.
 No. in Reg. Book on the ~~Steel~~ Steel Screw Steamer DIXIE ARROW Port belonging to New York.
 Built at Camden N. J. By whom New York Ship Corp. When built 1921.
 Owners Standard Transportation Coy. Owners' Address New York
 Yard No. 266 Electric Light Installation fitted by New York Ship Corp. When fitted 1921.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two - 20 K.W. Single vertical Marine Engines. Direct coupled

Capacity of Dynamo 182 Amperes at 110. Volts, whether continuous or alternating current Direct
 Where is Dynamo fixed Eng room gallery, aft. Whether single or double wire system is used Double
 Position of Main Switch Board Between Generators. having switches to groups of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each (A) Eng room (40) (B) Boiler room (6) (C) Upper deck (300)
(B) Upper deck (P) (C) Poop deck (10) (C') Shelter deck (14) (D) Pump room (10) (D') Shelter deck (P) (8) (E) Shelter deck S (8)
 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 cessel 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 10% 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 288. arranged in the following groups:—

Group	Description	Watts	Candle Power	Amperes
A	43 lights each of 40 WATTS	1720	15.4	Amperes
B	34 lights each of "	1360	12.2	Amperes
C	27 lights each of "	1080	9.7	Amperes
D	51 lights each of "	2052	18.3	Amperes
E	13 lights each of "	520	4.6	Amperes
	2 Mast head light with 1 lamps each of "	80	7.2	Amperes
	2 Side light with 1 lamps each of "	80	7.2	Amperes
	150-6700 Cargo lights of 16.	6000	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. No arc lights.

Where are the switches controlling the masthead and side lights placed Tell tale panel - Pilot house

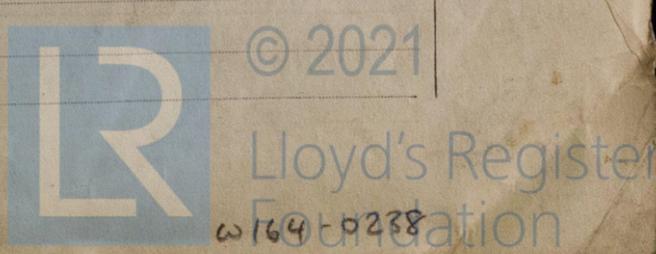
DESCRIPTION OF CABLES.

Main cable carrying 181 Amperes, comprised of 6/16 wires, each .0032 S.W.G. diameter, .1962 square inches total sectional area
 Branch cables carrying 35 Amperes, comprised of 7/17 wires, each .0025 S.W.G. diameter, .0178 square inches total sectional area
 Branch cables carrying 15.4 Amperes, comprised of 7/20 wires, each .0010 S.W.G. diameter, .0071 square inches total sectional area
 Leads to lamps carrying .5 Amperes, comprised of 7/23 wires, each .0004 S.W.G. diameter, .0034 square inches total sectional area
 Cargo light cables carrying 4.32 Amperes, comprised of 7/23 wires, each .0004 S.W.G. diameter, .0034 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Mechanical joints throughout, protected from chemical action and mechanical injury by conduit piping & own covering
 Joints in cables, how made, insulated, and protected

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 Conduit piping.



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 Conduit piping

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat As above.

What special protection has been provided for the cables near boiler casings As above

What special protection has been provided for the cables in engine room As above.

How are cables carried through beams Conduit through bulkheads, &c. Water-tight glands.

How are cables carried through decks As above.

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

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 yes.

If so, how are the lamp fittings and cable terminals specially protected Water tight + steam tight fittings

Where are the main switches and fuses for these lights fitted Panel on upper deck.

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 yes and with an amperemeter yes, 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 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 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.

A Parker & Co. Electrical Engineers Date NOV-5-1921

COMPASSES.

Distance between dynamo or electric motors and standard compass 230 ft.

Distance between dynamo or electric motors and steering compass 40 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>X</u>			
<u>X</u>			
<u>X</u>			

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.

By H. Allagoun Builder's Signature. Date NOV-5-1921

GENERAL REMARKS.

This installation has been fitted in accordance with the Requirements of the Rules & worked satisfactorily on trial.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light. 17/1/22. J. G. Fry Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York DEC 28 1921
Elect light



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

2m.11.11.18.—Transfer.