

REC'D NEW YORK AUG - 6 1921

Rpt. 13.

YANKEE ARROW

Received at London Office

WED. AUG. 31 1921

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 4519

Port of Philadelphia Date of First Survey July 7 1920 Date of Last Survey July 21 1921 No. of Visits 64  
 No. in Reg. Book on the Iron or Steel S.S. Yankee Arrow Port belonging to New York  
 Built at CAMDEN, N.J. By whom NEW YORK SHIP CO. When built 1921  
 Owners STANDARD OIL COMPANY Owners' Address New York  
 Yard No. 260 Electric Light Installation fitted by NEW YORK SHIP CO. When fitted 1921

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

CONSISTS OF 2-20KW SINGLE VERTICAL MARINE ENGINE, DIRECT CONNECTED, 110 VOLTS

Capacity of Dynamo 182 Amperes at 110 Volts, whether continuous or alternating current DIRECT

Where is Dynamo fixed ENG. RM. GALLERY-AFT Whether single or double wire system is used DOUBLE

Position of Main Switch Board BETWEEN GENERATOR having switches to groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each (A) ENG. RM (10); "A" BOILER ROOM (8); "B" UPPER DECK 8; "B"-UPPER DECK P; "C" POOP DECK 9; "C" SHELTER DECK (14) "D" PUMP ROOM (14) "D" SHELTER DK-PORT (8) "E" SHELTER DK-STBD (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 YES

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 :-

A	<u>43</u>	lights each of <u>40W</u>	candle power requiring a total current of <u>15.4</u>	Amperes
B	<u>39</u>	lights each of <u>40W</u>	candle power requiring a total current of <u>14.0</u>	Amperes
C	<u>34</u>	lights each of <u>40W</u>	candle power requiring a total current of <u>12.2</u>	Amperes
D	<u>51</u>	lights each of <u>40W</u>	candle power requiring a total current of <u>18.3</u>	Amperes
E	<u>13</u>	lights each of <u>40W</u>	candle power requiring a total current of <u>4.6</u>	Amperes
	<u>29</u>	lights each of <u>40W</u>	candle power requiring a total current of <u>7.7</u>	Amperes
	<u>1</u>	Mast head light with <u>2</u> lamps each of <u>16</u>	candle power requiring a total current of <u>1</u>	Amperes
	<u>1</u>	Side light with <u>2</u> lamps each of <u>16</u>	candle power requiring a total current of <u>1</u>	Amperes
	<u>5</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. NO ARC LAMPS

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 61/16 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 1.5 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.

Joints in cables, how made, insulated, and protected None

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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

How are the cables led through the ship, and how protected



007909-007918-0316

**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 CONDUIT

RUN IN CONDUIT

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat RUN IN CONDUIT

What special protection has been provided for the cables near boiler casings RUN IN CONDUIT

What special protection has been provided for the cables in engine room RUN IN CONDUIT

How are cables carried through beams CONDUIT through bulkheads, &c. STUFFING TUBES

How are cables carried through decks CONDUIT

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 AND 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 FROM W.T. SW. & RECEPT.

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 amperometer YES, fixed SW. 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 VAPOR PROOF

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.

*[Signature]*

Electrical Engineers

Date 2<sup>nd</sup> August 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>175</u>	<u>✓</u>	<u>17"</u>	<u>12"</u>
<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>

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 no degrees on all course in the case of the

standard compass and no degrees on all course in the case of the steering compass.

*[Signature]*

Builder's Signature.

Date 2<sup>nd</sup> August 1921

**GENERAL REMARKS.**

*This installation has been well fitted on board and proved satisfactory under full trial*

*[Signature]*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York AUG 16 1921

Elect light



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

2in. 11.10.—Transfer.