

WED. 10 APR. 1919

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 16269

Port of New York Date of First Survey 27 Jan Date of Last Survey 28 Feb/19 No. of Visits 16
 No. in Reg. Book on the Iron or Steel S. S. Ste. Duquesne Port belonging to Kearny, N. J.
 Built at Kearny, N. J. By whom Federal S. B. Co. When built 1919.
 Owners U. S. Shipping Board Owners' Address Phila. Pa. U. S. A.
 Yard No. 8. Electric Light Installation fitted by Federal S. B. Co. When fitted 1919.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Direct connected Generators, Gen. Elect. Co. type M.P.-6 Pole 475 R.P.M., compound wound 100kw.
Vert. sin. cyl. Engine 6 1/2" x 5". 125 H.P. Steam pressure.

Capacity of Dynamo 90/80 Amperes at 110/125 Volts, whether continuous or alternating current Continuous.

Where is Dynamo fixed Starboard lower engine room Whether single or double wire system is used Double.

Position of Main Switch Board Eng. room w. Generator. having switches to groups A. B. C. D. E. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1-4 bin. panel aft. Quarters under Prop. Rm. 1-6 bin. panel Midship Rm. house, located in passage. - 1-4 bin. panel in Fore Rm. house 1-6 bin. panel in Engine Room.

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

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 Not used.

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

Total number of lights provided for 196 arranged in the following groups:—

A Panel.	38	lights each of	50 Watts	candle power requiring a total current of	49	Amperes
B "	52	lights each of	50 "	candle power requiring a total current of	27	Amperes
C "	18	lights each of	50 "	candle power requiring a total current of	24	Amperes
D "	20	lights each of	50 "	candle power requiring a total current of	20	Amperes
E Feeder Lrd.	36	lights each of	50 "	candle power requiring a total current of	33	Amperes
1 Mast head light with	2	lamps each of	32	candle power requiring a total current of	1	Amperes
2 Side light with	2	lamps each of	32	candle power requiring a total current of	1	Amperes
9-1-8-4-5		Cargo lights of	A-50 Watt lamps	candle power, whether incandescent or arc lights	Incandescent.	

If arc lights, what protection is provided against fire, sparks, &c. Not used.

Where are the switches controlling the masthead and side lights placed Pilot house Automatic Indicators

DESCRIPTION OF CABLES.

	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
Main cable carrying	90	2	1/8	10350
Branch cables carrying	30	2	1/8	4140
Branch cables carrying	20	2	1/8	2760
Leads to lamps carrying	16	2	1/8	2030
Cargo light cables carrying	4	2	1/8	10350

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All conductors are National Electric Code, Double Braid.

Twin conductor cables up to 3000 C.M. are used where possible.

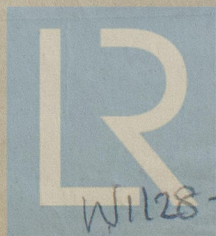
All conductors larger than 14 gaw. are stranded.

Joints in cables, how made, insulated, and protected Joints are soldered using non-corrosive flux, insulated with rubber tape & protected with a wrapping of friction tape. All joints are enclosed in approved fittings or junction 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 All wires with exception of 6 Volt call bell system are carried in approved iron conduit.



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Where possible to do so.*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *All cables enclosed in rigid iron conduit with W.T. couplings & fittings*

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 *Through holes provided & spaces available* through bulkheads, &c. *W.T. Drilled holes same as Decks*

How are cables carried through decks *In iron conduit, made W.T. with locknuts, washers & canvas painted with red lead*

Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *Enclosed in iron conduit which is clipped to inside of longitudinal channels*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Yes. 2 lamps Cargo space Shilin Lk.*

If so, how are the lamp fittings and cable terminals specially protected *With W.T. brass fixtures, with extra globe & guard.*

Where are the main switches and fuses for these lights fitted *Inside of W.T. door, Shilin Lk.*

If in the spaces, how are they specially protected *Switches are cast in heavy Navy Lk. brass, protected by locating them in corners*

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. 2 Generator, 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

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

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 *625* 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.

R.W. Egichson for Federal Shipbuilding & Engineering Co. Electrical Engineers

Date *27-2-19*

COMPASSES.

Distance between dynamo or electric motors and standard compass *Approx 100'*

Distance between dynamo or electric motors and steering compass *" 100'*

The nearest cables to the compasses are as follows:—

Cable carrying	Amperes	Distance from standard compass	Distance from steering compass
<i>30 searchlt.</i>	<i>8.0"</i>	<i>9.0"</i>	feet from steering compass
<i>3</i>	<i>6.0"</i>	<i>5.0"</i>	feet from steering compass
<i>1/2</i>	<i>In compass</i>	<i>In compass</i>	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 _____ degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

M.W. Smith, Chief Engineer, Federal Shipbuilding Co. Builder's Signature.

Date *27-2-19*

GENERAL REMARKS.

The fitting of the wires throughout the vessel is as stated in the Report and appears to be in accordance with the Committee's Requirements

It is submitted that this vessel is eligible for

THE RECORD. ELEC LIGHT

C. J. Macdonald.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec Lt.

New York MAR 26 1919

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.