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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4229.

Port of Newport News, Va. Date of First Survey Dec. 29th Date of Last Survey April 14th No. of Visits 9
 No. in on the Iron or Steel S/S "IROQUOIS" Port belonging to New York, N.Y.
 7. Book 29471 Built at Newport News, Va. By whom N.N.S.B. & DD. Co. When built 1927-4
 Owners New York & Miami S.S. Corp.. Owners' Address New York, N.Y. When fitted 1927-4
 rd No. 306 Electric Light Installation fitted by Newport News S.B. & D.D. Co.,

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2-150 K.W. & 1-75 K.W. compound wound, geared turbo-generator sets capable of delivering
1-1/4 load for 2 hours, with balancer sets for supplying 115V lighting current
 Capacity of Dynamo 1630 Amperes at 230 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine room-Lower Dk. level Whether single or double wire system is used 115/230 volts-3 wire
 Position of Main Switch Board " " " " " having switches to groups of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 20 distribution panels with an average of
20 switches each, located at centers of their respective connected loads.

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 200 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
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 1984 arranged in the following groups :-
 A 315 lights each of 12 candle power requiring a total current of 41 Amps. @ 115V
 B 765 lights each of 20 candle power requiring a total current of 167 " " "
 C 380 lights each of 32 candle power requiring a total current of 132 " " "
 D 413 lights each of 40 candle power requiring a total current of 180 " " "
 E 20 lights each of 160 candle power requiring a total current of 35 " " "
1 Mast head light with 2 lamps each of 48 candle power requiring a total current of 0.50
2 Side light with 4 lamps each of 48 candle power requiring a total current of 1.00
118 Cargo lights each of 20 candle power, whether incandescent or arc lights incandescent.

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

Where are the switches controlling the masthead and side lights placed in wheel house.

DESCRIPTION OF CABLES.

Main cable carrying 652 Amperes, comprised of 182 wires, each #16 S.W.G. diameter, .586 square inches total sectional area
 Branch cables carrying 35 Amperes, comprised of 19 wires, each #18 S.W.G. diameter, .039 square inches total sectional area
 Branch cables carrying 23 Amperes, comprised of 7 wires, each #17 S.W.G. diameter, .018 square inches total sectional area
 Leads to lamps carrying 5 Amperes, comprised of 7 wires, each #23 S.W.G. diameter, .004 square inches total sectional area
 Cargo light cables carrying 8 Amperes, comprised of 7 wires, each #20 S.W.G. diameter, .007 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Wiring in engine & boiler rooms & exposed locations- U.S. Navy Std. rubber insulated loaded & armored
 " " cargo spaces - nailproof galvanized steel double strip " " " "
 " " passenger spaces special nailproof galvanized steel tape " " armored wire
 Joints in cables, how made, insulated, and protected All joints are made in flame proof boxes, mechanically & electrically
secure without solder and then soldered. Insulation then applied equal to the original insulation
then thoroughly protected with friction tape.
 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 in gang hangers where grouped, otherwise in screwed
metal clips and protected by piping or iron plating where required.

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 Leaded & bronze armored cable used.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat varnished cambric insulated L. & A. cable.

What special protection has been provided for the cables near boiler casings varnished cambric leaded & armored cable.

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

How are cables carried through beams All cables armored through bulkheads, &c. All cables armored

How are cables carried through decks Metallic stiffing tubes extending at least 18" above deck.

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

If so, how are they protected leaded & steel strip armored cable used.

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 by heavy angle iron guards.

Where are the main switches and fuses for these lights fitted Outside cargo space in crews passage.

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 permanent How fixed screwed metal clips.

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 Yes.

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 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.

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass 15 feet

Distance between dynamo or electric motors and steering compass 15 "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>2½</u>	<u>5</u>	<u>10</u>	<u>10</u>
<u>2</u>	<u>15</u>	<u>8</u>	<u>8</u>
<u>10</u>	<u>15</u>	<u>8</u>	<u>8</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.

Builder's Signature.

Date

GENERAL REMARKS.

The fitting of the wires throughout this vessel is as stated in this report, and appears to be in accordance with the Committee's requirements. A full load test was carried out and all found to be in good working order.

J. Hudson
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK MAY 18 1927

Electric light

7-7



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.