

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3100

Port of Baltimore Md Date of First Survey Feb 23rd Date of Last Survey March 26th No. of Visits 9
 No. in Reg. Book on the Iron or Steel Steamer Aquipond Port belonging to New York
 Built at Sparrows Pt. Md. By whom Bethlehem S.B. Corp. When built 1921
 Owners Atlantic Gulf & West Indies S.S. Co Owners' Address New York
 Yard No. 4206 Electric Light Installation fitted by Bethlehem Shipbuilding Corp When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 20 K.W. Generators made by General Electric Co. direct connected to a single vertical engine 400 R.P.M.

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

Where is Dynamo fixed Dynamo flat, Engine room Whether single or double wire system is used double

Position of Main Switch Board adjacent to dynamo having switches to groups A-1-2 B-1-2 C-1-2 D-E-1-2 lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each one 10 cir. panel Bridge deck, 10 cir. panel midship house, pump room 8 cir. panel, 10 + 4 cir. panels Crews quarters port side 10 cir. panel Crews quarters Starboard side 10 cir. panel engine room 10 cir. panel Boilers room, two 10 cir. panel in alleyway

If fuses are fitted on main switch board to the cables of main circuit Cir. Breaker 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 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 arranged in the following groups:—

1 Bridge deck	58	lights each of	21	candle power requiring a total current of	13.18	Amperes
A 2 Crews quarters	63	lights each of	21	candle power requiring a total current of	17.3	Amperes
1 Deck portable	18	lights each of	21	candle power requiring a total current of	4.09	Amperes
B 2 10 ft	10	lights each of	21	candle power requiring a total current of	2.2	Amperes
1 Engine room	38	lights each of	21	candle power requiring a total current of	8.88	Amperes
C 1 Boilers room	21	lights each of	21	candle power requiring a total current of	4.77	Amperes
D Pump room	12	lights each of	21	candle power requiring a total current of	2.7	Amperes
1 Midship house	70	lights each of	18" 21	candle power requiring a total current of	15.9	Amperes
E 2 Search light	1	lights each of	18" 21	candle power requiring a total current of	33.0	Amperes
2 Mast head light with	2	lamps each of	40	candle power requiring a total current of	1.8	Amperes
2 Side light with	2	lamps each of	40	candle power requiring a total current of	1.8	Amperes

6 Cargo clusters Cargo lights of 6 lamps each 240 candle power, whether incandescent or arc lights

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

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

DESCRIPTION OF CABLES.

Main cable carrying	150	Amperes, comprised of	61	wires, each #	16	S.W.G. diameter,	.1962	square inches total sectional area
Branch cables carrying	13.18	Amperes, comprised of		wires, each #	19	S.W.G. diameter,	.0444	square inches total sectional area
Branch cables carrying	15.9	Amperes, comprised of		wires, each #	19	S.W.G. diameter,	.0732	square inches total sectional area
Branch cables carrying	33	Amperes, comprised of		wires, each #	18	S.W.G. diameter,	.0304	square inches total sectional area
Branch cables carrying	14.3	Amperes, comprised of		wires, each #	17	S.W.G. diameter,	.0175	square inches total sectional area
Leads to lamps carrying	.2	Amperes, comprised of		wires, each	22	S.W.G. diameter,	.0042	square inches total sectional area
Cargo light cables carrying	2.7	Amperes, comprised of		wires, each	30	S.W.G. diameter,	.0017	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Navy Standard Cable. The wires are stranded, rubber covered, taped with an insulating tape, coated with jute filler, again taped & covered with a heavy cotton braid, impregnated with a waterproof insulating compound

Joints in cables, how made, insulated, and protected All joints in cables are made with an approved type of cable splice, taped with rubber and friction tapes

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 rigid conduit

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 *rigid conduit*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *rigid conduit*

What special protection has been provided for the cables near boiler casings *rigid conduit*

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

How are cables carried through beams *run in conduit* through bulkheads, &c. *Conduit lock nuts both sides*

How are cables carried through decks *Conduit & stuffing boxes*

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 *run in conduit*

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 wire guards & junction boxes*

Where are the main switches and fuses for these lights fitted *Main Switch-board*

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 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 *no*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *By gas light globes & guards*

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.

BETHLEHEM SHIPBUILDING CORP., LTD.
SPARROWS POINT PLANT

Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *150*

Distance between dynamo or electric motors and steering compass *156*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>5</i>	<i>1 1/2"</i>	<i>1'0"</i>	
<i>8</i>	<i>8"</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.

Builder's Signature. Date

GENERAL REMARKS.

Installation has been fitted in an approved manner tested out under varying loads and found to work in a satisfactory manner.

It is submitted that this vessel is eligible for THE RECORD.

Elec. Lt. Rell 20/3/21

L. Rosworthy
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York MAY 10 1921



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