Rpt. 13.

Received at London Office WED. 14 JUN. 1916

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 852

Port of Boston Date of First Survey 13 April Date of Last Survey 25 April 1916 No. of Visits 15

No. in Reg. Book ✓ on the ~~Iron or~~ Steel s/s CUBADIST Port belonging to New York

Built at Quincy, Mass By whom Fore River S. B. Corp^n When built 1916

Owners Cuba Distilling Co. Owners' Address 40 Exchange Place, New York City

Yard No. 247 Electric Light Installation fitted by Fore River S. B. Corp^n When fitted 1916.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 15 K.W. 6 pole compound wound generators direct driven by vertical engines

Capacity of Dynamo 137 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room Whether single or double wire system is used Double

Position of Main Switch Board Engine Room having switches to groups A.B.C.D.E.F.G.H.J.K.L. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1 in Quarters aft with 6 switches, 1 in Quarters midships with 8 switches

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 No

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 To all but Lamp circuits

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of less than 100 per cent over the normal current

Are all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions Yes Enclosed type 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 On fuse cases

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

Total number of lights provided for 233 arranged in the following groups :—

A	Quarters Aft 68	lights each of 20	candle power requiring a total current of	17	Amperes
B	Engine Room Upper 11	lights each of 20	candle power requiring a total current of	3	Amperes
C	" " Lower Part 12	lights each of 20	candle power requiring a total current of	3	Amperes
D	" " Stbd 11	lights each of 20	candle power requiring a total current of	23	Amperes
E	Searchlight	lights each of -	candle power requiring a total current of	1	Amperes
F	2 Mast head light with 1	lamps each of 40	candle power requiring a total current of	1	Amperes
	2 Side light with 1	lamps each of 40	candle power requiring a total current of		

32 Cargo lights of candle power, whether incandescent or arc lights 30 incandescent 2 arcs

If arc lights, what protection is provided against fire, sparks, &c. Heavy glass globes with wire protection.

Arc lights will only be used when carrying molasses or non-inflammable cargoes

Where are the switches controlling the masthead and side lights placed Engine room & pilot house

DESCRIPTION OF CABLES.

Main cable carrying	137	Amperes, comprised of	61	wires, each	.045"	~~S.W.G.~~ diameter, .098 square inches total sectional area
A Branch cables carrying	17	Amperes, comprised of	37	wires, each	.04"	~~S.W.G.~~ diameter, .047 square inches total sectional area
B Branch cables carrying	3	Amperes, comprised of	7	wires, each	.025"	~~S.W.G.~~ diameter, .003 square inches total sectional area
Leads to lamps carrying	3	Amperes, comprised of	7	wires, each	.025"	~~S.W.G.~~ diameter, .003 square inches total sectional area
Cargo light cables carrying	7	Amperes, comprised of	25	wires, each	.01"	~~S.W.G.~~ diameter, .003 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Heavy rubber insulation covered with braided waterproof fibre as per U.S. Navy standard. Carried in steel conduit throughout except in officers cabins where wood moulding is used.

Joints in cables, how made, insulated, and protected Soldered, well covered with tape & made in metal junction boxes throughout. Where wood moulding is used in berths, joints are made in porcelain 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 Steel conduits.

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 Steel conduits

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Steel conduits

What special protection has been provided for the cables near boiler casings Steel conduits

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

How are cables carried through beams Steel conduits through bulkheads, &c. Steel conduits

How are cables carried through decks Steel conduits made watertight

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

If so, how are they protected Steel conduits run high up under decks

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes in bunkers

If so, how are the lamp fittings and cable terminals specially protected Lamps are fitted high up under deck & are protected by heavy wire & glass guards which can be replaced with metal covers.

Where are the main switches and fuses for these lights fitted in engine room

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 Attachment plugs provided.

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 with 2, fixed on 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 Gas proof metallic fittings, with heavy glass guards & wire protectors.

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° Farhenheit 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.

FORE RIVER SHIP-BUILDING CORP.

By. H. Brown Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass Wheler's motor about 20 feet

Distance between dynamo or electric motors and steering compass " " " 12

The nearest cables to the compasses are as follows:—

A cable carrying 1/4 Amperes close to feet from standard compass close to feet from steering compass

A cable carrying 4 Amperes about 10 feet from standard compass about 8 feet from steering compass

A cable carrying 19 Amperes " 16 feet from standard compass " 12 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.

FORE RIVER SHIP-BUILDING CORP.

By.- H. Brown Builder's Signature. Date

GENERAL REMARKS. This installation has been fitted in accordance with the Rules & approved plans & the workmanship & material are good. The installation has been satisfactorily tried under full load & the vessel is eligible, in my opinion, to receive the notation 'ELEC. LIGHT' in the Register Book.

John S. Heck.

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. JUN. 23. 1916

Im.11.13.—Transfer.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Rpt. 92.

Port of Boston *Continuation of Report No.* 852 *dated* 30th May 1916 *on the*

Electric Light Installation of the S/S CUBADIST of NEW YORK

Groups of Lights continued

G Wireless 2 K.W. requiring a total current of 20 amperes
H Fire Room Lower 10 lights each of 20 candle power requiring a total current of 3 amperes
J " " Upper 8 " " " 20 " " " " " " " " 2 "
K Quarters For'd 79 " " " 20 " " " " " " " " 20 "
L Cargo 30 " " " 20 " +2arcs " " " " " " 25 "

Description of Cables continued

C	carrying	3	amps	comprised of	7	wires	each	.025"	diameter	.003 □" total sectional area
D	"	3	"	"	7	"	"	.025"	"	.003 " " " "
E	"	23	"	"	19	"	"	.04	"	.023 " " " "
F	"	4	"	"	7	"	"	.045	"	.011 " " " "
G	"	20	"	"	7	"	"	.057	"	.018 " " " "
	"	3	"	"	7	"	"	.025	"	.003 " " " "
	"	4	"	"	7	"	"	.025	"	.003 " " " "
	"	19	"	"	61	"	"	.04	"	.078 " " " "
L	"	25	"	"	19	"	"	.045	"	.031 " " " "

John S. Heck

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