

13. Recd 19 Feb 04.

REPORT ON ELECTRIC LIGHTING INST.

Port of PHILADELPHIA Date of First Survey 19-8-03 Date of Last Survey 19-8-03
 No. in 38 on the Steel s.s. Mongolia Port belonging to New York S
 Book 38 Built at Camden N.J. By whom New York S
 Owners E. H. Harriman Owners' Address 120 Broadway
 Yard No. 5 Electric Light Installation fitted by New York S & C

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Electric Plant consists of three (3) vertical Marine Generating Set
 acity. The generators are directly connected to Cross Compound Engin

Capacity of Dynamo 227 Amperes at 110 Volts, whether continuous or alternating

Where is Dynamo fixed In special recess in Engine Room

Position of Main Switch Board In Dynamo Room having switches to groups Sixteen

Positions of auxiliary switch boards and numbers of switches on each A - Engine Room Stb'd; eight; Boiler
Upper Dk Fr. 88 - Nine; Steerage Aft - 6; Forecastle 8; B - Poop - 6; Bridge Dk. State
Rooms - 10; Capt's. Quarters; - 8; Lavatories Shelter Dk - 10; State Rooms Shelter Dk -
D - Lavatories Bridge Dk - 8; Saloon Shelter Dk - 12; Steerage Forward - 6; E - Engine
Room Port - 8.

If cut outs are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch board to the cables of auxili
 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 100 per cent over the no

Are all cut outs fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire

are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit no

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 815 arranged in the following groups:—

A	Forty-two	lights each of	Sixteen	candle power requiring a total current of	Twenty-one	Amperes
B	Twenty-eight	lights each of	Sixteen	candle power requiring a total current of	Fourteen	Amperes
C	Forty-six	lights each of	Sixteen	candle power requiring a total current of	Twenty-three	Amperes
D	Sixty-one	lights each of	Sixteen	candle power requiring a total current of	Thirty and five-tenths	Amperes
E	Forty-two	lights each of	Sixteen	candle power requiring a total current of	Twenty-one	Amperes
1	Mast head light with	1	lamps each of	Sixteen	candle power requiring a total current of	five-tenths Amperes
1	Side light with	1	lamps each of	Sixteen	candle power requiring a total current of	five-tenths Amperes
12	Cargo lights of	Sixty-four	each	candle power, whether incandescent or arc lights	Incandescent	

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

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

DESCRIPTION OF CABLES.

Main cable carrying	227	Amperes, comprised of	91	wires, each	14	B. & S. diameter, .2912	square inches total sectional area
Branch cables carrying	14	Amperes, comprised of	7	wires, each	16	B. & S. diameter, .0140	square inches total sectional area
Branch cables carrying	21	Amperes, comprised of	19	wires, each	18	B. & S. diameter, .0247	square inches total sectional area
Leads to lamps carrying	.5	Amperes, comprised of	1	wires, each	14	B. & S. diameter, .0032	square inches total sectional area
Cargo light cables carrying	2	Amperes, comprised of	2	wires, each	14	B. & S. diameter, .0064	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Wire after being tinned, covered with a layer of pure rubber, then 3/32" of vulcanized rubber
 then two layers of a substantial waterproof & flame proof braid. In locations exposed to
 moisture, steam or the weather, conductor is further protected

Joints in cables, how made, insulated, and protected After a thoroughly mechanical an
made the joint is soldered using rosin as flux; then wrapped wi
then by cotton tape to the insulation of the original conductor

Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes Ar

made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, o

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 The places exposed to heat
injury in iron pipe, and in quarters in wooden mouldings.



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Lloyd's Register
 Foundation

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yes

2/8 cables by hydraulic power for the cables in open alleyways or where exposed to weather or moisture in iron pipe

Area of each

710 for the cables near galleys or oil lamps or other sources of heat iron pipe

8-32 Descrip. of covering for the cables near boiler casings asbestos covered wire in iron pipe

9 3/4 for the cables in engine room iron pipe

2 1/2 iron pipes or rubber bushings through bulkheads, &c. ditto

in iron pipe

bunkers no or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

State the in iron pipe

bunkers or spaces which may at times be used for cargo, coals, or baggage yes (but not in bunkers)

p fittings and cable terminals specially protected in iron pipe & iron boxes with heavy iron lids

main switches and cut outs for these lights fitted in passageways clear of cargo spaces

the spaces, how are they specially protected not in cargo spaces.

any switches or cut outs fitted in bunkers none

light cables, whether portable or permanently fixed portable How fixed

essels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel

the returns from the lamps connected to the hull

joints with the hull in accessible positions

WARRANT FOR CARRYING PETROLEUM.

for carrying petroleum, are all switches and cut outs fitted in positions not liable to the accumulation of petroleum vapour or gas

ies, cut outs, or joints of cables fitted in the pump room or companion

umps specially protected in places liable to the accumulation of vapour or gas

is now supplied with a voltmeter and three amperemeter fixed on switchboard

copper used is guaranteed to have a conductivity of 98% per cent. that of pure copper.

ulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours' immersion in seawater.

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.

C. Richards for N.Y. Shipbuilding Co. Electrical Engineers Date 11-2-04

PASSES.

Distance between dynamo or electric motors and standard compass about 200 ft.

Distance between dynamo or electric motors and steering compass " 225 "

nearest cables to the compasses are as follows:—

1 cable carrying	.5	Amperes	SIX	feet from standard compass	1 1/2	feet from steering compass
1 cable carrying	✓	Amperes	✓	feet from standard compass	✓	feet from steering compass
1 cable carrying	✓	Amperes	✓	feet from standard compass	✓	feet from steering compass

the compasses been adjusted with and without the electric installation at work at full power yes

maximum deviation due to electric currents, etc., was found to be 0° 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 11-2-04

installation has been fitted in accordance with rules and is found satisfactory.

Robert-Haig, Surveyor to Lloyd's Register of British and Foreign Shipping.

It is submitted that this installation appears to be satisfactory.

in hang scenes

of Entry Fee. \$ 15.00

total \$ 800.75

of Entry Fee \$ 10.50

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

