

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2349.

Port of SAN FRANCISCO. Date of First Survey 15th May Date of Last Survey 18th June No. of Visits fiveNo. in on the Iron or Steel s/s "A C M E". Port belonging toReg. Book Built at San Francisco, By whom Union Iron Works Co. When built 1916

Owners Owners' Address

Yard No. 125 Electric Light Installation fitted by UNION IRON WORKS COMPANY. When fitted 1916.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

General Electric Co. Dynamos direct connected to reciprocating engines.

Capacity of Dynamo 364 Amperes at 110 Volts, whether continuous or alternating current continuousWhere is Dynamo fixed Engine Room Whether single or double wire system is used doublePosition of Main Switch Board near dynamo having switches to groups of lights, &c., as belowPositions of auxiliary switch boards and numbers of switches on each (A) Forecastle - 8 switches. (B) Midship house, 6 switches. (C) After Quarters - 10 switches. (D) Engine Room - 6 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 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 10 per cent over the normal currentAre 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 circuitAre all switches and fuses constructed of incombustible materials and fitted on incombustible bases yesTotal number of lights provided for 260 arranged in the following groups:—

A	46	lights each of	25	candle power requiring a total current of	11	Amperes
B	54	lights each of	25	candle power requiring a total current of	13	Amperes
C	86	lights each of	25	candle power requiring a total current of	21	Amperes
D	68	lights each of	25	candle power requiring a total current of	17	Amperes
E		lights each of		candle power requiring a total current of		Amperes
3	Mast head light with	1 lamps each of	40	candle power requiring a total current of	1½	Amperes
2	Side light with	1 lamps each of	40	candle power requiring a total current of	1	Amperes
3	Cargo lights of	240	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 Pilot House.

DESCRIPTION OF CABLES.

Main cable carrying	182	Amperes, comprised of	19	wires, each	- S.W.G. diameter, .211	square inches total sectional area
Branch cables carrying	13	Amperes, comprised of	7	wires, each	- S.W.G. diameter, .041	square inches total sectional area
Branch cables carrying	11	Amperes, comprised of	7	wires, each	- S.W.G. diameter, .041	square inches total sectional area
Leads to lamps carrying	½	Amperes, comprised of	1	wires, each	- S.W.G. diameter, .0042	square inches total sectional area
Cargo light cables carrying	2½	Amperes, comprised of	28	wires, each	- S.W.G. diameter, .0042	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All wiring rubber covered, double braid, in conduit.

Joints in cables, how made, insulated, and protected Soldered, rubber and friction tape and P & B paint.

All joints made in cast iron 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 yesAre there any joints in or branches from the cable leading from dynamo to main switch board noHow are the cables led through the ship, and how protected conduit

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W1006-0186

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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 conduit

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

What special protection has been provided for the cables near boiler casings asbestos covered wire in conduit.

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

How are cables carried through beams conduit through bulkheads, &c. conduit through stuffing (tubes).

How are cables carried through decks conduit through deck stuffing tubes.

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

If so, how are they protected 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 cast iron junction box with vapor proof globe (and guard.

Where are the main switches and fuses for these lights fitted forecastle.

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

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 vapor proof globes and 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 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.

UNION IRON WORKS COMPANY,

By

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass thirty feet

Distance between dynamo or electric motors and steering compass thirty feet

The nearest cables to the compasses are as follows:—

A cable carrying 1 Amperes 1 feet from standard compass feet from steering compass

A cable carrying 1 Amperes 1 feet from standard compass feet from steering compass

A cable carrying 20 Amperes 3 feet from standard compass 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 nil degrees on all course in the case of the

standard compass and nil degrees on all course in the case of the steering compass.

UNION IRON WORKS COMPANY,

By

Builder's Signature.

Date

GENERAL REMARKS.

Committee's Minute

TUE 14 NOV. 1916

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



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