

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Tilbury Date of First Survey 8 March Date of Last Survey 20<sup>th</sup> July No. of Visits 4  
 No. in 9318 on the Iron or Steel ship "ORMUZ" Port belonging to London  
 Reg. Book 9318 Built at Vegesack By whom Bremer Vulkan When built 1914  
 Owners Orient Steam Navigation Co. Ltd. Owners' Address 5, Fenchurch Avenue.  
 Yard No. Electric Light Installation fitted by Bremer Vulkan When fitted 1914

DESCRIPTION OF DYNAMO, ENGINE, ETC. One Steam Turbine driven geared Generator 250 k.w. at 110 volts. Three Reciprocating Direct Acting Dynamo Sets 100 k.w. at 110 volts. One emergency Diesel Direct Acting Dynamo Set 55 k.w. at 110 Volts.  
 Capacity of Dynamo 2272, 3-950 & 500 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Auxiliary Engine Room Emergency Dynamo on "C" Deck  
 & Distributing "D" Deck Whether single or double wire system is used Double  
 Position of Main Switch Board After end of Engine Room having switches to groups 20 in No. of lights, &c., as below  
for isolating each machine  
 Positions of auxiliary switch boards and numbers of switches on each Auxiliary Engine Room, Four Panels fitted with  
D.P. Switchgear from Dynamos to Main Switchboard.

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 50 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 yes

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

Total number of lights provided for 2380 arranged in the following groups:—

|                      |     |                |    |   |       |         |
|----------------------|-----|----------------|----|---|-------|---------|
| A                    | 306 | lights each of | 25 | candle power requiring a total current of | 83.4  | Amperes |
| B                    | 414 | lights each of | 25 | candle power requiring a total current of | 112.9 | Amperes |
| C                    | 441 | lights each of | 25 | candle power requiring a total current of | 120.3 | Amperes |
| D & Stores           | 606 | lights each of | 25 | candle power requiring a total current of | 165.2 | Amperes |
| E & F                | 428 | lights each of | 25 | candle power requiring a total current of | 116.7 | Amperes |
| Engine & Boiler room | 181 | lights each of | 25 | candle power requiring a total current of | 49.3  | Amperes |
| Mast head light with | 2   | lamps each of  | 32 | candle power requiring a total current of | 2     | Amperes |
| Side light with      | 2   | lamps each of  | 32 | candle power requiring a total current of | 2     | Amperes |

numerous Cargo lights of ✓ candle power, whether incandescent or are lights Both

If arc lights, what protection is provided against fire, sparks, &c. Fireproof Glass over Carbons

Where are the switches controlling the masthead and side lights placed On Bridge

## DESCRIPTION OF CABLES.

|                             |      |                       |     |             |       |                         |                                    |
|-----------------------------|------|-----------------------|-----|-------------|-------|-------------------------|------------------------------------|
| Main cable carrying         | 2270 | Amperes, comprised of | 127 | wires, each | .103  | S.W.G. diameter, each 1 | square inches total sectional area |
| Branch cables carrying      | 950  | Amperes, comprised of | 91  | wires, each | .109  | S.W.G. diameter, each 1 | square inches total sectional area |
| Branch cables carrying      | 200  | Amperes, comprised of | 37  | wires, each | .109  | S.W.G. diameter, each 1 | square inches total sectional area |
| Leads to lamps carrying     | 35   | Amperes, comprised of | 9   | wires, each | .065  | S.W.G. diameter, each 1 | square inches total sectional area |
| Cargo light cables carrying | 6    | Amperes, comprised of | 40  | wires, each | .0076 | S.W.G. diameter, each 1 | square inches total sectional area |

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered, Taped & braided, also armoured & well protected

Joints in cables, how made, insulated, and protected

None

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances --- 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 ---

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 All protected & under cover



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W1218-0140

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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 Lead covered

armoured and braded

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat lead covered armoured and braded

What special protection has been provided for the cables near boiler casings lead covered armoured and braded

What special protection has been provided for the cables in engine room Lead covered armoured and braded.

How are cables carried through beams Lead bushed holes through bulkheads, &c. Watertight Glands etc.

How are cables carried through decks Deck Tubes raised 3' 6" above deck.

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

If so, how are they protected Lead covered armoured and braded

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 Watertight bulkhead fittings

Where are the main switches and fuses for these lights fitted on Watertight metal Boxes outside bunkers

If in the spaces, how are they specially protected Cast iron covers enclosing Lamp fitting.

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 Switchbo

**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 \_\_\_\_\_ 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.

Original installation of General Electric  
Power & Wiring etc for Refrigerating Plant by  
allan J. Selford

## Electrical Engineers

Date \_\_\_\_\_

## COMPASSES.

Distance between dynamo or electric motors and standard compass 24 feet (Motor on Same Deck)

Distance between ~~dynamo~~ or electric motors and steering compass 20 feet (Deck in between Motor and Compass)

*The nearest cables to the compasses are as follows:—*

A cable carrying 30 Amperes 24 feet from standard compass 21 feet from steering compass

A cable carrying 2 Amperes 8 feet from standard compass 5 feet from steering compass

|                         |                |                                   |                                   |
|-------------------------|----------------|-----------------------------------|-----------------------------------|
| <i>A cable carrying</i> | <i>Amperes</i> | <i>feet from standard compass</i> | <i>feet from steering compass</i> |
|-------------------------|----------------|-----------------------------------|-----------------------------------|

Have the compasses been adjusted with and without the electric installation at work at full power Yes stated in order

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.

GENERAL REMARKS. The Electric lighting & power installation of this vessel appears to have been well fitted & in accordance with the rules, & is working in a satisfactory manner.

The vessel is therefore eligible to have the record of the  
Sight retained in the Register Book. D. L.

It is submitted that  
this vessel is eligible for  
THE RECORD

THE RECORD.  
TUE. 22 AUG. 1922

### Committee's Minute

*Surveyor to Lloyd's Register of Shipping.*

FRI. 13 APR. 1923

FRI. AUG. 31 1923

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