

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 637A

Port of *Kremen* Date of First Survey *4th Feb 22* Date of Last Survey *27th March 22* No. of Visits *12*
 No. in *on the Iron or Steel* *Turn 5/5 'OHIO' ex 'MÜNCHEN'* Port belonging to *Southampton*
 Reg. Book *69044* Built at *Kremen* By whom *Act. Geo. W. Esler* When built *1922*
 Owners *Royal Mail Steam Packet Co.* Owners' Address *London*
 Yard No. *209* Electric Light Installation fitted by *Limona. Schuckertwerke G.m.b.H.* When fitted *1921-23*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Four compound wound dynamos coupled direct to four enclosed compound engines.
 Capacity of *each* *870* Amperes at *115* Volts, whether continuous or alternating current *continuous*
 Where is Dynamo fixed *after part of engine space* Whether single or double wire system is used *single, double at compound*
 Position of Main Switch Board *engine space* having switches to groups *list attached* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *list attached*

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 *80* 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 *list attached* arranged in the following groups:—

	lights each of	candle power requiring a total current of	Amperes
A			
B			
C			
D			
E			
<i>2</i>	<i>Mast head light with carbon lamps each of</i>	<i>32</i>	<i>2</i> Amperes
<i>2</i>	<i>Side light with 4 lamps each of</i>	<i>32</i>	<i>2</i> Amperes
<i>18</i>	<i>Cargo lights of</i>	<i>5 x 25</i>	<i>incandescent</i>

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

Where are the switches controlling the masthead and side lights placed *In Bridge Chart House*

DESCRIPTION OF CABLES.

Main cable carrying *870* Amperes, comprised of *2x61* wires, each *2.25* *m/m* diameter, *2x240* square *m/m* total sectional area
 Branch cables carrying *list* Amperes, comprised of *list* wires, each *list* S.W.G. diameter, *list* square inches total sectional area
 Branch cables carrying *several* Amperes, comprised of *list* wires, each *list* S.W.G. diameter, *list* square inches total sectional area
 Leads to lamps carrying *6* Amperes, comprised of *1* wires, each *1.4* *m/m* diameter, *1.5* square *m/m* total sectional area
 Cargo light cables carrying *6* Amperes, comprised of *1* wires, each *1.4* *m/m* diameter, *1.5* square *m/m* total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main & branch cables are insulated by vulcanized rubber lead sheathed and iron armoured

Joints in cables, how made, insulated, and protected *watertight joint box*

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 *by iron casings*



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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 and armoured*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & armoured*

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

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

How are cables carried through beams *armoured cable only* through bulkheads, &c. *w/t glands*

How are cables carried through decks *in galv. iron tubes*

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 *iron casings*

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 *special fittings glass globes iron protected*

Where are the main switches and fuses for these lights fitted *on sub-distribution boards*

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 *wood adaptors*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *brass screw & washers*

How are the returns from the lamps connected to the hull *brass screws & washers*

Are all the joints with the hull in accessible positions *yes*

Is the installation supplied with a voltmeter *yes* and with an amperemeter *yes*, fixed *on 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 *✓*

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 *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.

SIEMENS-SCHÜCKERTWERKE

Gesellschaft mit beschränkter Haftung

TECHNISCHES BUREAU HAMBURG

Electrical Engineers

Date

COMPASSES.

Distance between dynamo ~~or electric motor~~ and standard compass *266 feet*

Distance between dynamo ~~or electric motor~~ and steering compass *269 "*

The nearest cables to the compasses are as follows:— *(double wire within 39 feet from compass)*

A cable carrying *40* Amperes *8* feet from standard compass *11* feet from steering compass

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

A cable carrying Amperes 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 *no* degrees on *any* course in the case of the

standard compass and *no* degrees on *any* course in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS.

This installation has been tried on a 12 hour trial trip and found to work well.

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

Electric Light
GP 1-6-23

G. H. E. Kamm
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

ELECTRIC LIGHTING INSTALLATION of the
Twin s.s. " OHIO " ex " MUENCHEN "
Lighting - Stations

Description	Position	Maximum Current	Area	Comp. of Strand	Number of Lamps
<u>G-Deck</u>					
Emergency Station	Frame 139	amps. 112	sq. mm 70	mm 19/2,15	262 and 23
Station 1	" 161	32	25	7/2,1	80 " 23
Controlstat.	" 162	4	2,5	1/1,8	5
<u>F-Deck</u>					
Station 3	Frame 145	60	95	19/2,5	252
" 4	" 87	36	95	19/2,5	160
<u>E-Deck</u>					
Emergency Station 5	Frame 127	50	95	19/2,5	200
Station 5	" "	7	25	7/2,1	28
Station 6	" 94	23	95	19/2,5	92
Emergency Station 6	" "	3	25	7/2,1	12
Station 7	" 68	33	95	19/2,5	86
Emergency Station 7	" "	4	25	7/2,1	16
<u>D-Deck</u>					
Station 8	Frame 134	93	95	19/2,5	390
" 9	" 103	26	95	19/2,5	141
" 10	" 67	17	70	19/2,15	65
<u>C-Deck</u>					
Station 11	Frame 210	40	25	7/2,1	125
Emergency Station 11	" "	4	25	7/2,1	16
Station 11a	" "	17	35	19/1,55	70
" 12	" 141	47	95	19/2,5	188
Emergency Station 12	" "	7	25	7/2,1	28
Station 12a	" "	27	35	19/1,55	108
" 12b	" 176	24	35	19/1,55	95
" 13	" 105	41	95	19/2,5	203
Emergency Station 13	" "	2	25	7/2,1	8
Station 14	" 67	54	70	19/2,15	216
Emergency Station 14	" "	4	25	7/2,1	18
Station 15	" 23	37	70	19/2,15	134
Emergency Station 15	" "	4	25	7/2,1	14
<u>B-Deck</u>					
Station 24	Frame 57	43	35	19/1,55	174
" 25	" 43	34	35	19/1,55	136
" 26	" 24	18	35	19/1,55	74
" 20	" 77	6	25	7/2,1	24
" 20a	" 96	5	25	7/2,1	20
Emergency Station 20	" 77	7	25	7/2,1	21
Station 21	" 77	5	25	7/2,1	20
" 21a	" 96	4	25	7/2,1	16

ELECTRIC LIGHTING INSTALLATION of the
Twin s.s. " OHIO " ex " MUEENCHEN "
Lighting-Stations

Description Position Maximum Current Area Comp. of Strand Number of Lamps

A-Deck

Station 22 Frame 69 amps. 7 sq. mm 25 M/M 7/2,1 28

Machinery-Space

Station 16 Frame 143 9 25 7/2,1 35

" 17 " 125 9 25 7/2,1 34

Emergency Stations 17 " 125 2 25 7/2,1 8

Station 18 " 117 8 25 7/2,1 32

" 19 " 101 2 25 7/2,1 8

Emergency Stations 19 " 101 2 25 7/2,1 8

Station 23 " 68 5 25 7/2,1 20

Power-Stations

Description Position Maximum Current Area Composition of Strand

G-Deck

Wireless Station Frame 151 amps. 30 sq. mm 25 M/M 7/2,1

F-Deck

Station 3 Frame 145 33 95 19/2,5

" 4 " 87 15 95 19/2,5

E-Deck

Station 7 Frame 68 9 35 19/1,55

D-Deck

Station 8 Frame 134 40 70 19/2,15

" 8a " " 95 95 19/2,5

" 8b " 82 107 95 19/2,5

" 9 " 103 62 70 19/2,15

" 10 " 67 51 35 19/1,55

C-Deck

Station 11a Frame 210 87 50 19/1,85

" 12 " 141 54 95 19/2,5

" 12a " " 22 50 19/1,85

" 13 " 105 66 70 19/2,15

" 14 " 67 16 35 19/1,55

" 15 " 23 16 35 19/1,55

B-Deck

Station 20 Frame 77 135 95 19/2,5

" 22 " " 160 95 19/2,5

" 24 " 67 16 35 19/1,55

" 25 " 43 25 35 19/1,55

" 26 " 24 12 35 19/1,55