

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 59902

Port of NEWCASTLE ON TYNE Date of First Survey 14<sup>th</sup> Feb'y Date of Last Survey 1<sup>st</sup> Mar 1911 No. of Visits 6  
 No. in on the Iron or Steel Arabien Port belonging to Copenhagen  
 Reg. Book Built at Neptune Works, Walker By whom Swan, Hunter & Wigham When built 1911  
 Owners Det Ostasiatiske Kompagni Owners' Address Copenhagen  
 Yard No. 846 Electric Light Installation fitted by Swan Hunter Wigham Richardson When fitted 1911

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Open Single cylinder engine  $6\frac{1}{2}$  dia x 6" stroke 100 lbs pressure coupled  
 direct to multipolar Dynamo  
 Capacity of Dynamo 10 KW Amperes at 65 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Starboard below in Engine Rm Whether single or double wire system is used double wire  
 Position of Main Switch Board near Dynamo having switches to groups 4 groups of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each in 6 chartroom for navigation  
& switches beside lights at other places

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 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 10% per cent over the normal current

Are all cut outs 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

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

Total number of lights provided for 95 arranged in the following groups:—

A	<u>15</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>12.6</u>	Amperes
B	<u>25</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>21.3</u>	Amperes
C	<u>27</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>23.1</u>	Amperes
D	<u>28</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>24.0</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	<u>2</u>	Mast head light with <u>4</u>	lamps each of <u>32</u>	candle power requiring a total current of	<u>1.4</u>	Amperes
	<u>2</u>	Side light with <u>1</u>	lamps each of <u>32</u>	candle power requiring a total current of	<u>1.4</u>	Amperes

5 clusters Cargo lights of 5 lamps each 16 candle power, whether incandescent or arc lights & arc

If arc lights, what protection is provided against fire, sparks, &c. Guarded glass globe

Where are the switches controlling the masthead and side lights placed Chartroom

## DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 13 L.S.G. diameter, .123 square inches total sectional area  
 Branch cables carrying 24 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .034 square inches total sectional area  
 Branch cables carrying 12 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .012 square inches total sectional area  
 Leads to lamps carrying 7 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area  
 Cargo light cables carrying Amperes, comprised of wires, each L.S.G. diameter, square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

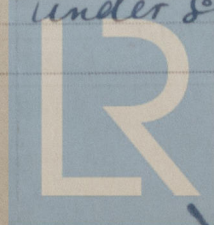
Armouring of Galvanized steel wire Lead covering  
vulcanized braided & pure India rubber Iron piping  
where necessary

Joints in cables, how made, insulated, and protected none

Are all the joints of cables thoroughly soldered, resin only having been used as a flux none 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 none

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 main clipped to deck under side



© 2021

Lloyd's Register  
Foundation

W565-0034



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 *Armour & lead covering*

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

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

*fiber funnels*

through bulkheads, &c. *W & S Brass glands*

How are cables carried through decks

*Iron piping not less than 18 above deck*

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 *between decks lead & Armoured wire*

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

*no*

If so, how are the lamp fittings and cable terminals specially protected

"

Where are the main switches and cut outs for these lights fitted

"

If in the spaces, how are they specially protected

"

Are any switches or cut outs fitted in bunkers

"

Cargo light cables, whether portable or permanently fixed

*portable*

How fixed

*portable socket*

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

*double wire*

How are the returns from the lamps connected to the hull

"

Are all the joints with the hull in accessible positions

"

The installation is

*yes*

supplied with a voltmeter and

*yes*

an amperemeter, fixed

*Main board*

VESSELS BUILT FOR CARRYING PETROLEUM.

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

✓

Are any switches, cut outs, 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 *100%* per cent. that of pure copper.

Insulation 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.

*Swan Hunter Wigham Richards* Electrical Engineers

Date *Mar 4. 1911*

COMPASSES.

Distance between dynamo or electric motors and standard compass

*100 ft*

Distance between dynamo or electric motors and steering compass

"

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>8</i>	<i>6</i>	<i>7</i>	<i>7</i>
<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>

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.

DATE

PLAN No.

ENGINEER'S OFFICE.

Builder's Signature.

Date

*7/3/11*

GENERAL REMARKS.

*This electric light installation has been satisfactorily fitted on board, and the vessel is eligible in my opinion to have the record Electric Light in the Register Book*

*R. M. Coomber.*

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



© 2021

Lloyd's Register Foundation