

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 49709

Port of Newcastle Date of First Survey Oct 16 Date of Last Survey Oct 22 '05 No. of Visits 6  
 No. in on the Iron or Steel 1/2 "OBERHAUSEN". Port belonging to Hamburg  
 Reg. Book 8 Built at Low Walker By whom Messrs Swan Hunter & Wigham When built 1905  
 Owners Deutsch. Austral. Dampf. Ges. Owners' Address Hamburg  
 Yard No. 734 Electric Light Installation fitted by Messrs J. H. Holmes & Co. When fitted 1905

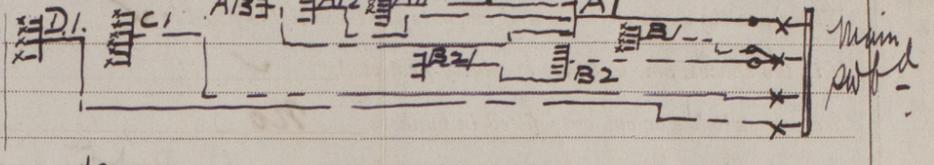
### DESCRIPTION OF DYNAMO, ENGINE, ETC.

one 5" x 8 3/4" x 5" Foster compound type steam engine 210 lbs. at 100 lbs. thro' a flypass  
 coupled to one No 15/2 four pole compound wound dynamo by J. H. Holmes & Co.  
 Capacity of Dynamo 1/5 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Starboard side eng room bottom platform Sturges

Position of Main Switch Board near dynamo having switches to groups A B C D of lights, &c., as below

- Positions of auxiliary switch boards and numbers of switches on each
- A. 1. 3 WAY 10A FUSE BOX IN PANTRY.
  - A. 1. 6 " 5A " DO " WHEELHOUSE WITH 4 SWS
  - A. 1. 2. 4 " " DO " PASS STARBOARD
  - A. 1. 3. 3 " " DO " PORT
  - B. 1. 4 " " DO " ENG ROOM 4 SWS
  - B. 2. 6 WAY 5A FUSE BOX IN MESS ROOM
  - B. 2. 1. 3 " DO " BATH ROOM
  - C. 1. 6 " DO " 10A IN PANTRY WITH SWS FOR CARGES
  - D. 1. 4 " DO " IN STEERING GEAR



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 no

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 50 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

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

Total number of lights provided for 99 arranged in the following groups:—

A	Mast ships	17	lights each of	16	candle power requiring a total current of	19.8	Amperes
C	Cargo fwd	4	lights each of	25	candle power requiring a total current of	28.8	Amperes
		24	lights each of	16 32			
D	Cargo aft	16	lights each of	16 32	candle power requiring a total current of	19.2	Amperes
		30	lights each of	16 25			
B	Engines & Gears	3	lights each of	16	candle power requiring a total current of	20.8	Amperes
E			lights each of	25	candle power requiring a total current of	2	Amperes
	Mast head light	1	lamp each of	32	candle power requiring a total current of	2.4	Amperes
	Side lights	2	lamps each of	32	candle power requiring a total current of	2.4	Amperes
	5 fine Cargo lights	5	each of	6x16	candle power, whether incandescent or arc lights	incandescent	

If are lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed in wheelhouse. (A. 11)

### DESCRIPTION OF CABLES.

Main cable carrying 15 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, .0465 square inches total sectional area  
 Branch cables carrying 19.2 Amperes, comprised of 7 wires, each 17 L.S.G. diameter, .0170 square inches total sectional area  
 Branch cables carrying 8.4 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .0072 square inches total sectional area  
 Leads to lamps carrying 6 Amperes, comprised of 1 wire, each 15 L.S.G. diameter, .0018 square inches total sectional area  
 Cargo light cables carrying 3.6 Amperes, comprised of 108 wires, each 38 L.S.G. diameter, .006 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

cables are insulated with pure rubber taped where run in piping further braided in eng room &c further protected by galv non wire sheathing & braided overall in cabins lead covering over taping.

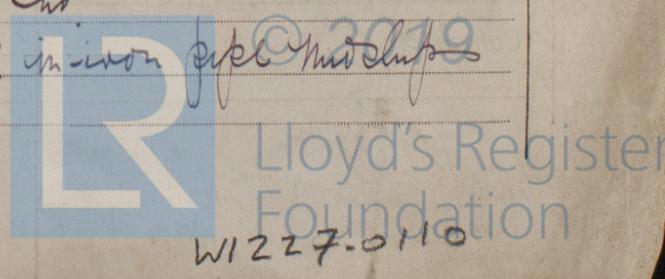
Joints in cables, how made, insulated, and protected spliced soldered & then insulated with approved rubber protective tape &c.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes Are all joints in accessible positions, none being

no made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage no

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 under bridge deck in iron pipe & under main deck forward tank.



**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 galv'd wire mesh

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

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

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

How are cables carried through beams insulating bushes through bulkheads, &c. stuffing boxes

How are cables carried through decks deck tubes

Are any cables run through coal bunkers no or cargo spaces no or spaces which may be used for carrying cargo, stores, or baggage no

If so, how are they protected ✓

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 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 \_\_\_\_\_

**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 installation is \_\_\_\_\_ supplied with a voltmeter and also an amperemeter, fixed on main panel

The copper used is guaranteed to have a conductivity of 98 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.

J. H. Holman & Co. Electrical Engineers Date Nov. 3. 05.

**COMPASSES.**

Distance between dynamo or electric motors and standard compass about 76 ft.

Distance between dynamo or electric motors and steering compass " 66 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>9.4</u>	Amperes	<u>12</u>	feet from standard compass	<u>8</u>	feet from steering compass
A cable carrying	<u>19.8</u>	Amperes	<u>40</u>	feet from standard compass	<u>32</u>	feet from steering compass
A cable carrying	<u>28.8</u>	Amperes	<u>40</u>	feet from standard compass	<u>32</u>	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 the course in the case of the standard compass and nil degrees on the course in the case of the steering compass.

SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

Builder's Signature. Date 7 Nov. 1905.

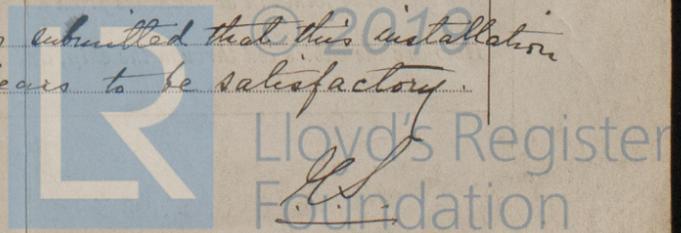
**GENERAL REMARKS.**

The installation examined & found satisfactory.

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

Committee's Minute \_\_\_\_\_

It is submitted that this installation appears to be satisfactory.



27.11.05

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13.