

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 31145

Port of Glasgow Date of First Survey 11th Jan/12 Date of Last Survey 17th Feb/12 No. of Visits 14
 No. in Reg. Book on the ~~Iron or Steel~~ 7th Wiltshire Port belonging to London
 Built at Clydebank By whom John Brown & Co. Ltd. When built 1912
 Owners Federal Steam Nav Co Owners' Address _____
 Yard No. 401 Electric Light Installation fitted by John Brown & Co. Ltd. When fitted 1912.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two vertical open type engines having single cylinders 10" diam x 9" stroke each coupled direct to a multipolar compound wound dynamo. Speed 250 RPM 100 lbs Steam Pressure
 Capacity of Dynamo 300 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed In Thrust recess in Engine Room Whether single or double wire system is used Double Wire
 Position of Main Switch Board Ditto having switches to groups A, B, C, D, E, F, G, H, I of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each _____

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 Yes
 Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 100 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 Yes
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 495 arranged in the following groups :-

| | | | | | | |
|---|-------------------------------------|-----------------|----|---|------|---------|
| A | 77+3 FANS | 16 | " | candle power requiring a total current of | 38.9 | Amperes |
| B | 77+1 " + Fan Control lights each of | " | " | " | 43.3 | " |
| C | 72+2 | 48 | " | " | 39.3 | " |
| D | 74+1 FAN lights each of | " | " | " | 33.6 | Amperes |
| E | 65 | " | " | " | 37.0 | " |
| F | 56 | " | " | " | 45.6 | Amperes |
| G | 43 | " | " | " | 40.8 | " |
| H | Circuit Wound only lights each of | <u>No lamps</u> | " | " | - | Amperes |
| I | Wireless Telegraphy Heater | | | | | |
| J | Inst of T. S. 22. H lights each of | 6, 8, 16, 32. | " | " | 56.7 | Amperes |
| K | 2 Mast head light with | 2 lamps each of | 32 | " | 2.2 | Amperes |
| L | 2 Side light with | 2 lamps each of | 32 | " | 2.2 | Amperes |

9 fixed 12 portable Cargo lights of 4-16cp fixed 5-16cp portable 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 In tank box in Wheel House

DESCRIPTION OF CABLES.

Main cable carrying 300 Amperes, comprised of 57 wires, each 12 L.S.G. diameter, .3105 square inches total sectional area
 Branch cables carrying 43.8 Amperes, comprised of 19 wires, each 17 L.S.G. diameter, .04627 square inches total sectional area
 Branch cables carrying 15.4 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02227 square inches total sectional area
 Leads to lamps carrying 2.1 Amperes, comprised of 3 wires, each 21 L.S.G. diameter, .002384 square inches total sectional area
 Cargo light cables carrying 3.0 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .007052 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

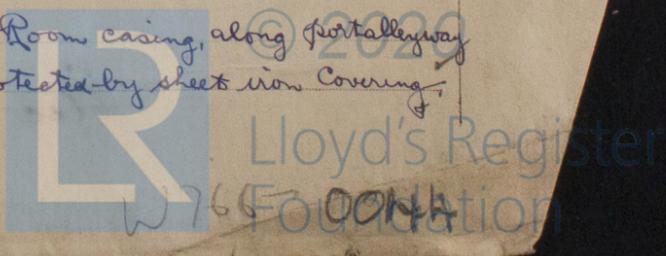
Conductors are insulated with pure and vulcanising india rubber, taped, the whole vulcanised together, then lead covered overall

Joints in cables, how made, insulated, and protected No joints

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 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 Lead Covered Cables led up Engine Room casing, along port alleyway to passengers accommodation, also along upper deck for and aft to Crews Quarters and protected by sheet iron covering



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

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Salv'd Iron Armouring

What special protection has been provided for the cables near boiler casings Lead Casing and Armouring

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

How are cables carried through beams Through holes bushed with lead through bulkheads, &c. Through WT Bands

How are cables carried through decks Through Iron Deck 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 By lead casing protected by sheet iron covering

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 & Fixed How fixed Supported by iron brackets to masts

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 _____

The installation is _____ supplied with a voltmeter and 2 an amperemeter, fixed on Sunboard

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.

John Brown & Company, Limited

J. Henderson

Electrical Engineers

Date _____

COMPASSES.

Assistant Secretary

Distance between dynamo or electric motors and standard compass 16 ft from Dynamos 2 ft from Wireless Telegraphy Office

Distance between dynamo or electric motors and steering compass 16 ft " " " 30 " " " "

The nearest cables to the compasses are as follows:—

| A cable carrying | Amperes | feet from standard compass | feet from steering compass |
|------------------|--------------|----------------------------|-----------------------------------|
| <u>56.7</u> | <u>10-6"</u> | <u>6-0"</u> | <u>feet from steering compass</u> |
| <u>25</u> | <u>10-6"</u> | <u>6-0"</u> | <u>feet from steering compass</u> |
| <u>1.5</u> | <u>4-3"</u> | <u>3-0"</u> | <u>feet from steering compass</u> |

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 every course in the case of the standard compass and Nil degrees on every course in the case of the steering compass.

J. Henderson

Builder's Signature.

Date _____

GENERAL REMARKS.

This installation has been fitted in accordance with the rules and has been seen running satisfactorily under working conditions.

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

J.W.D. 29/2/19

Harry Clarke

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

563.H.—Transfer.

Committee's Minute **GLASGOW 27 FEB. 1912**

Elec. Light



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.