

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. **19575**

Port of **Sunderland** Date of First Survey ☒ Date of Last Survey **21st Feb 99** No. of Visits ☒
 No. in Reg. Book on the ~~Iron~~ **Steel** **S/S Ville de Yamato** Port belonging to **Havre**
 Built at **Sunderland** By whom **Sir J. Laing & Sons** When built **1899**
 Owners **Comp. Havraise Pen de Nav à Vap** Owners' Address **Havre**
 Yard No. **504** Electric Light Installation fitted by **Sunderland Forge & Eng. Co.** When fitted **1899**

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 pole "Pallion" dynamo coupled to 7x6 open vertical engine

Capacity of Dynamo **100** Amperes at **100** Volts, whether continuous or alternating current **continuous**

Where is Dynamo fixed **in Engine Room**

Position of Main Switch Board **close to dynamo** having switches to groups **6** of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

Each light a switch.

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 **25** 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 **Engineers instructed.**

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases **yes**

Total number of lights provided for **88** arranged in the following groups:—

A Foremast 11 lights each of 16 candle power requiring a total current of 6.6 Amperes
B Engineers 13 lights each of 16 candle power requiring a total current of 7.8 Amperes
C Engine Room 22 lights each of 16 candle power requiring a total current of 13.2 Amperes
D Saloon 26 lights each of 16 candle power requiring a total current of 15.6 Amperes
E Cargo 16 lights each of 32 candle power requiring a total current of 46.4 Amperes
2 Mast head light with 1 lamp each of 32 candle power requiring a total current of 2.4 Amperes
2 Side light with 1 lamp each of 32 candle power requiring a total current of 2.4 Amperes
4 clusters Cargo lights of 4-32cp each candle power , whether incandescent or arc lights

If arc lights, what protection is provided against fire, sparks, &c. **No arcs, except search light.**

Where are the switches controlling the masthead and side lights placed

DESCRIPTION OF CABLES.

Main cable carrying 75 Amperes, comprised of 37 wires, each 16 L.S.G. diameter, .12 square inches total sectional area
Branch cables carrying 45 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .061 square inches total sectional area
Branch cables carrying 25 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .035 square inches total sectional area
Leads to lamps carrying .6 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .003 square inches total sectional area
Cargo light cables carrying 48 Amperes, comprised of 130 wires, each 38 L.S.G. diameter, .004 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised Rubber insulation on cables, taped, braided and compounded.

Joints in cables, how made, insulated, and protected **Spliced, soldered, covered with pure rubber tape, solution, Blackley tape, & Compound.**

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 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 **Iron pipes throughout ship's hold.**



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

none exposed to weather.

What special protection has been provided for the cables near galley or oil lamps or other sources of heat iron pipes.

What special protection has been provided for the cables near boiler casings iron pipes.

What special protection has been provided for the cables in engine room iron pipes.

How are cables carried through beams in vulcanised fibre frames through bulkheads, &c. watertight glands

How are cables carried through decks in watertight insulating duct tubes.

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

If so, how are they protected in iron pipes.

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 1201

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 an amperemeter, fixed

The installation is supplied with a voltmeter and an amperemeter, fixed in engine room

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 2000 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.

P. pro THE SUNDERLAND FORGE & ENGINEERING Co., Ltd.

W. K. Laidler

Electrical Engineers

Date Mar 8 99

COMPASSES.

Distance between dynamo or electric motors and standard compass 68 ft approx

Distance between dynamo or electric motors and steering compass 74 ft

The nearest cables to the compasses are as follows:—

A cable carrying .6 Amperes 8 feet from standard compass 14 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 none degrees on course in the case of the

standard compass and none degrees on course in the case of the steering compass.

By SIR JAMES LAING & SONS, Limited

Richard Laidler

Builder's Signature.

Date 13.3.99

GENERAL REMARKS.

This installation as far as can be seen appears to be in accordance with the requirements of the Rules.

Pat R. Salmon

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

Committee's Minute

This installation appears to be fitted in accordance with the Rules.

THE REVIEWERS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.