

REPORT ON ELECTRIC LIGHTING INSTALLATION. No 9228

N. I. S. Co. L^{td}
RECEIVED
15 SEP 1924

Port of *Belfast* Date of First Survey *18th Jan'y* Date of Last Survey *Nov 2nd* No. of Visits *7*
 No. in Reg. Book *on the Steel* *S.S. Ville d'Amiens* Port belonging to *Havre*
 Built at *Londonderry* By whom *North of Ireland S. Coy* When built *1921*
 Owners *Compagnie Havraise Pen de Nav à Vap.* Owners' Address *Havre*
 Card No. *98* Electric Light Installation fitted by *Sunderland Forge & Eng Co* When fitted *1921*

Copy

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Compound Wound Multipolar Dynamos coupled to vertical open type steam engine.
 Capacity of Dynamo (each) *200.* Amperes at *100.* Volts, whether continuous or alternating current *Continuous*
 Where is Dynamo fixed *In Engine Room* Whether single or double wire system is used *Double*
 Position of Main Switch Board *In Engine Room* having switches to groups *10.* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *One in Chart House 9 Switches for Nav. Lts.*
One in Engine Room 10 Switches

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 cessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits
 Are the fuses of non-oxidizable metal *Yes* and constructed to fuse at an excess of *100.* 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 *445.* arranged in the following groups:—

| Group | Description | Current (Amperes) | Power (Candle Power) |
|-------|---|-------------------|----------------------|
| A | Accommodation 64 Lts each of 16 CP + 1 @ 32 CP + 7 amp. | 28.3 | Compass |
| B | Cargo Lt. 13 lights each of 32 CP + 1 @ 3000 CP | 30.6 | Amperes |
| C | Wheeled Installation | 30.0 | " |
| D | Navigation 57 lights each of 16 CP + 4 @ 32 CP + 7 amp | 33.8 | Amperes |
| E | Cargo Forward 25 " " 32 CP + 2 @ 3000 CP | 52.8 | " |
| F | Accom. Forward 23 lights each of 16 CP | 5.4 | Amperes |
| G | " " 74 " " 16 CP + 7 amp | 28.9 | " |
| H | Starboard lights each of 5 @ 16 CP + 7 amp | 30.7 | Amperes |
| J | Stores etc. 22 " " 16 CP | 9.3 | " |
| K | Engine Rm etc. 63 lights each of 16 CP | 57.8 | Amperes |
| | 2 Mast head lights with 1 lamp each of 32 | 2.4 | Amperes |
| | 2 Side light with 1 lamp each of 32 | 2.4 | Amperes |
| | 3 Cargo lights of 3000 C.P. | | incandescent |

If arc lights, what protection is provided against fire, sparks, &c. *None fitted.*

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

DESCRIPTION OF CABLES.

Main cable carrying *200* Amperes, comprised of *37* wires, each *0.093* S.W.G. diameter, *0.25* square inches total sectional area
 Branch cables carrying *52.8* Amperes, comprised of *19* wires, each *18* S.W.G. diameter, *0.04* square inches total sectional area
 Branch cables carrying *28.9* Amperes, comprised of *7* wires, each *16* S.W.G. diameter, *0.022* square inches total sectional area
 Leads to lamps carrying *7.8* Amperes, comprised of *3* wires, each *22* S.W.G. diameter, *0.002* square inches total sectional area
 Cargo light cables carrying *7.8* Amperes, comprised of *100* wires, each *.006* S.W.G. diameter, *0.0028* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper conductors insulated with pure and vulcanising india rubber, taped and the whole vulcanised and finished. In Accommodation, Lead covered & braided overall. in Machinery Spaces, Lead covered, armoured & Braided.
 Joints in cables, how made, insulated, and protected *No joints*

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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

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 *Drawn into screwed galvanised wrought iron pipe made watertight*

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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 armoured

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

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 holes bushed with Fibre through bulkheads, &c. W.I. Packing Glands

How are cables carried through decks in W.I. Deck tubes

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

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

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

Where are the main switches and fuses for these lights fitted

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 in W.I. Boxes

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

Is the installation supplied with a voltmeter Yes 2, and with an amperemeter Yes 2, fixed on Main Switchboard

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 One 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.

P. Pro The Sunderland Forge & Eng. Co. Ltd.

The Thompsons

Electrical Engineers

Date 5th Sepr. 1924.

COMPASSES.

Distance between dynamo or electric motors and standard compass

130 feet

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying 14.9 Amperes 15 feet from standard compass — feet from steering compass

A cable carrying 0.6 Amperes 3 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 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.

W. Fletcher

Builder's Signature.

Date 24th Sept 1924

GENERAL REMARKS.

This installation is fitted in accordance with the Rules & was satisfactory on trial under full load.

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

William Butler

See £ 95-0-0

W.D. 11/24

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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