

MON 4 JUN 1917

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29933

Port of Hull Date of First Survey 24th Apr Date of Last Survey May 3/17 No. of Visits 6
 No. in 17 on the Iron-on Steel Stawler Kuniski Port belonging to Cardiff
 Reg. Book 17 Built at Zelby By whom Cochrane & Sons Ltd When built 1917-5
 Owners Reale & West Ltd Owners' Address Boone Street Cardiff
 Yard No. 668 Electric Light Installation fitted by Hutcheon Electrical Co Ltd When fitted 1917-5

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Vertical engine enclosed type by Lissons coupled direct to compound wound dynamo

Capacity of Dynamo 50 Amperes at 65 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine Room Starboard side Whether single or double wire system is used double

Position of Main Switch Board Engine Room near dynamo having switches to groups 3 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each one 5 way distribution box in Forecastle
one 10 way in wheel house one 3 way in Engine Room one 4 way in Cabin

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 vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 35% 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 54 arranged in the following groups:—

| | | | | | | |
|---|----------------------|----------------|---------------|--|---|---------------------------|
| A | 7 | lights each of | 16 | candle power requiring a total current of | 6.3 | Amperes |
| B | 25 | lights each of | 16 | candle power requiring a total current of | 22.5 | Amperes |
| C | 12 | lights each of | 16 | candle power requiring a total current of | 10.8 | Amperes |
| D | 10 | lights each of | 16 | candle power requiring a total current of | 9.0 | Amperes |
| E | | lights each of | | candle power requiring a total current of | | Amperes |
| 3 | Mast head light with | 1 | lamps each of | 32 | candle power requiring a total current of | Included in above Amperes |
| 2 | Side light with | 1 | lamps each of | 32 | candle power requiring a total current of | above Amperes |
| 3 | Cargo lights of | one 5 x two 2 | 16 | 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 Wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying 50 Amperes, comprised of 19 wires, each 18 S.W.G. diameter, .034 square inches total sectional area
 Branch cables carrying 10.8 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area
 Branch cables carrying 22.5 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area
 Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 4.5 Amperes, comprised of 130 wires, each 40 S.W.G. diameter, .0025 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

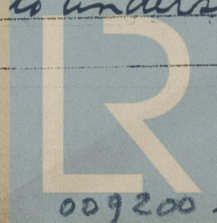
V.V.P. cable Laid, lead covered & armoured

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

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 bunks, 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 Through beams clipped to underside of decks
its bulkheads with strong galvanized iron clips



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *yes except in bunkers*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead covered & armoured*

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

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 *Lead bushes where not armoured through bulkheads, &c. U. I. brass glands ✓*

How are cables carried through decks *proper iron duct pipes ✓*

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

If so, how are they protected *Lead covered & armoured*

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

If so, how are the lamp fittings and cable terminals specially protected *Strong C. I. fitting with bulls eyes & guards*

Where are the main switches and fuses for these lights fitted *Stoke hold & Forecastle*

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 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*, and with an amperemeter *yes*, fixed *main switch board*

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 *600* 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.

THE NUMBER ELECTRICAL ENGINEERING Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 35 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 |
|------------------|---------|----------------------------|----------------------------|
| 2 | Lead to | | |
| 2 | " " | | |
| | | | |

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 *any* course in the case of the standard compass and *nil* degrees on *any* course in the case of the steering compass.

J. H. Cochrane Builder's Signature. Date *31/5/1917.*

GENERAL REMARKS.

This vessel has been fitted with an electric light installation as above & the workmanship is good on completion it was tested under full working condition & found satisfactory

It is submitted that this vessel is eligible to

THE RECORD. Elec. light.

J. H. Cochrane 4/6/17

Frank A. Stanger

Surveyor to Lloyd's Register of Shipping

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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