

## REPORT ON ELECTRIC LIGHTING INSTALLATION.

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No. 29129

Port of Hull Date of First Survey 13-12-15 Date of Last Survey Feb 2/16 No. of Visits 14  
 No. in Reg. Book on the Iron or Steel S. J. Amoryllis Port belonging to  
 Owners H. M. Government By whom Charles S. B. - Eng. & Ltd When built 1916-2  
 Yard No. 621 Electric Light Installation fitted by Falconer Bros & Co. When fitted 1916-2

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 Enclosed type Engines coupled direct to  
2 Compound wound dynamo  
 Capacity of Dynamo 250 Amperes at 105 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Shutting Platform Whether single or double wire system is used Double  
 Position of Main Switch Board Near dynamo having switches to groups A. B. C. D. E. F. of lights, &c., as below  
 Positions of auxiliary <sup>fuse</sup> boards and numbers of <sup>fuses</sup> on each 1 x 8 Way in Crew's space forward, 1 x 8 Way in Engine Room, 1 x 8 Way in Officer's lobby aft  
1 x 8 Way in Crew's space forward, 1 x 8 Way in Engine Room

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 25 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 157 + 2 Projectors arranged in the following groups:-

A Navigation	18 lights each of	16	candle power requiring a total current of	10.8	Amperes
B Cabin & crew	77 lights each of	16	candle power requiring a total current of	46.2	Amperes
C Wheelhouse	3 lights each of	16	candle power requiring a total current of	1.8	Amperes
D Machinery	59 lights each of	16	candle power requiring a total current of	34.8	Amperes
E External Projectors	lights each of		candle power requiring a total current of	80	Amperes
F Port			candle power requiring a total current of	1.2	included Amperes
2 Mast head light with	1 lamp each of	16	candle power requiring a total current of	1.8	included Amperes
2 Side light with	1 x 16 lamps each of		candle power requiring a total current of		
2 Cargo lights of	8 x 50		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	250 Amperes, comprised of	61 wires, each	15 S.W.G. diameter,	245 square inches total sectional area
Branch cables carrying	80 Amperes, comprised of	19 wires, each	14 S.W.G. diameter,	094 square inches total sectional area
Branch cables carrying	46.2 Amperes, comprised of	37 wires, each	15 S.W.G. diameter,	14 square inches total sectional area
Leads to lamps carrying	6 Amperes, comprised of	1 wires, each	17 S.W.G. diameter,	00246 square inches total sectional area
Cargo light cables carrying	12 Amperes, comprised of	19 wires, each	20 S.W.G. diameter,	019 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure & Vulcanized I.R. taped & lead covered

Joints in cables, how made, insulated, and protected

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

Are there any joints in or branches from the cable leading from dynamo to main switch board

How are the cables led through the ship and how protected Fore & aft bulkheads Lead covered cables clipped up along



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible

Generally

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

" " "

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

through bulkheads, &c.

W. J. Blanks

How are cables carried through decks

Deck tubes

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

If so, how are they protected

Lead covered iron casing in bunkers

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

Special guarded fittings

Where are the main switches and fuses for these lights fitted

Outside of compartments

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 W. J. connection 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

and with an amperemeter

Yes

fixed on Main 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 2500 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.

Falconer, Lion & Co

Electrical Engineers

Date Jan 21<sup>st</sup> 1916

COMPASSES.

Distance between dynamo or electric motors and standard compass

104 ft

Distance between dynamo or electric motors and steering compass

96 "

The nearest cables to the compasses are as follows:—

A cable carrying	Ampere	feet from standard compass	feet from steering compass
6	1.5	1.5	
6	5	10	
6			

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

degrees on

course in the case of the

standard compass and

degrees on

course in the case of the steering compass.

FOR EARLE'S  
SHIPBUILDING & ENGINEERING CO. LIMITED.

Builder's Signature.

Date 8.2.16

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 conditions for 6 hours continuously & found satisfactory

It is submitted that

this vessel is eligible for

THE RECORD Elec. light.

JAW  
16.2.16

Frank A. Sturgeon

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

Committee's Minute