

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 26337

Port of Hull Date of First Survey Jan. 5<sup>th</sup> Date of Last Survey Jan 12/13 No. of Visits 5  
 No. in 181 on the Steel S.S. Tagoland Port belonging to  
 Reg. Book 181 Built at Hull By whom Earlie & Co When built 1913-6  
 Owners (A. Brostrom & Co. Agents) Owners' Address  
 Yard No. 599 Electric Light Installation fitted by Clarke Chapman & Co. When fitted 1913-6

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

High Pressure Vertical direct acting engine open type, coupled direct to 6 pole compound wound dynamo

Capacity of Dynamo 90 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine room bottom platform Whether single or double wire system is used double

Position of Main Switch Board " near dynamo having switches to groups 4 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each chart room 7. engine room 6.

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

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 50% 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 122 arranged in the following groups:-

A Salon {16} lights each of 32 candle power requiring a total current of 34.22 Amperes

B lights each of candle power requiring a total current of Amperes

C Engineers {19} lights each of 32 candle power requiring a total current of 20.3 Amperes

D Aft {15} lights each of 32 candle power requiring a total current of 14.5 Amperes

E Engine room 31 lights each of 16 candle power requiring a total current of 17.98 Amperes

2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 2.32 Amperes

2 Side light with 1 lamps each of 32 candle power requiring a total current of 2.32 Amperes

in Cargo lights of four 32 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 Chart room.

## DESCRIPTION OF CABLES.

Main cable carrying 87 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, .075 square inches total sectional area

Branch cables carrying 34.22 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02222 square inches total sectional area

Branch cables carrying 14.5 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .007 square inches total sectional area

Leads to lamps carrying 1.8 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .00181 square inches total sectional area

Cargo light cables carrying 4.64 Amperes, comprised of 168 wires, each 38 L.S.G. diameter, .0002 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Taped lead covered & armoured

Joints in cables, how made, insulated, and protected no joints except mechanical ones in junction boxes.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux ✓ 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 through beams & on fore & aft poles above main deck. & clipped to same with strong W.D. Galton clips



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 & 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 through bulkheads, &c. water-tight glands

How are cables carried through decks deck pipes 1 1/2" high galvanized fitted with double nut & washer

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 Lead covered & armoured clipped to fore & aft for der. top side.

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 W. I. 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 ✓

The installation is now supplied with a voltmeter and also an amperemeter, fixed on main switch board.

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.

For CLARKE, CHAPMAN & Co. LTD.

Electrical Engineers

Date July 8<sup>th</sup> 1913

COMPASSES.

Distance between dynamo or electric motors and standard compass about 150 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
<u>9</u>	<u>10</u>	<u>10</u>	<u>10</u>
<u>1.8</u>	<u>6</u>	<u>6</u>	<u>6</u>
<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</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 all course in the case of the standard compass and nil degrees on all course in the case of the steering compass.

Builder's Signature.

Date

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 & found satisfactory.

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

Frank L. Kingston

15/7/13.

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

Committee's Minute

5-811-Transfer.



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.