

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Received at London Office

MON 10 JUN 1919

Port of Sunderland Date of First Survey 11 Mar Date of Last Survey 2 Apr 19 No. of Visits 2
 No. in Reg. Book on the Iron or Steel S. S. "Aymeric" Port belonging to Hughes
 Built at Sunderland By whom Messrs Rolt, Thompson & Sons Ltd. When built 1919
 Owners The Bank Line Ltd (Capt. Andrew Wainwright) Owners' Address 74 Hope St Glasgow
 Yard No. 304 Electric Light Installation fitted by Messrs Salconar Bros & Co. When fitted 1919
Newcastle-on-Tyne.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1. 6 1/2 x 6" Open Type Engine coupled direct to a compound wound multipolar dynamo. Steam pressure 100 lbs per sq in 360 R.P.M.
 Capacity of Dynamo 100 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 wire
 Position of Main Switch Board In engine room having switches to groups A. B. C. D & E of lights, &c., as below
 Positions of auxiliary ^{fuse} switch boards and numbers of ^{fuses} switches on each 5-way section boxes: Saloon Pass: 1, Steam Steer Gear 2, 9-way 5-way boards: Engine Room 1, Chart Room 1, Saloon Pass: 1, Accom aft 1, 5-way 5-way boards: Saloon Pass 1, Steam Steer Gear 1, 2-way 2-way boards: Forecastle 1.
 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-oxidisable metal yes and constructed to fuse at an excess of 50 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 150 arranged in the following groups:—

Group	Number of Lights	Each of	Candle Power	Requiring a total current of	Amperes
A Cargo	30	lights each of	16	15	Amperes
B Accom	69	lights each of	16	34.5	Amperes
C Wireless	—	lights each of	—	15	Amperes
D Navigation	21	lights each of	16	10.5	Amperes
E Eng. and Boiler Rooms	30	lights each of	16	15	Amperes
2 Mast head light with	1	lamps each of	32	2	Amperes
2 Side light with	1	lamps each of	32	2	Amperes
5 Cargo lights of	6-16				Amperes

candle power, whether incandescent or arc lights incandescent

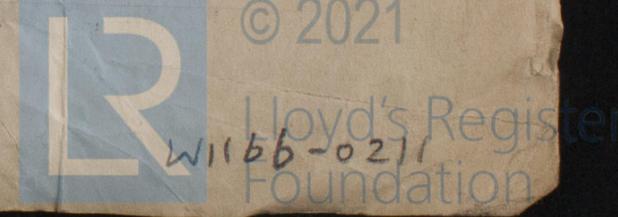
If arc lights, what protection is provided against fire, sparks, &c.
 Where are the switches controlling the masthead and side lights placed On Bridge

DESCRIPTION OF CABLES.

Main cable carrying 90 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area ✓
 Branch cables carrying 34.5 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area ✓
 Branch cables carrying 15 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0125 square inches total sectional area ✓
 Leads to lamps carrying 5 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area ✓
 Cargo light cables carrying 3 Amperes, comprised of 114 wires, each 35 S.W.G. diameter, .0032 square inches total sectional area ✓

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered and armoured and braided cables, tinned copper conductors, insulated with pure para rubber, vulcanised india rubber taped and braided.
 Joints in cables, how made, insulated, and protected no joints made
 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 steel armoured cables led on underside of decks through beams and on bulkheads. all in sight.



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 In open alleyways—steel armoured cables. When exposed to weather—Carried through 3" pipes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Armoured and braided

What special protection has been provided for the cables near boiler casings Armoured and braided

What special protection has been provided for the cables in engine room Armoured and braided

How are cables carried through beams Bushed holes through bulkheads, &c. Watertight glands

How are cables carried through decks Watertight deck tubes

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 steel armoured cables led between beams

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 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 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 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 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.

F. Thomas Cross Electrical Engineers Date 15.4.19

COMPASSES.

Distance between dynamo or electric motors and standard compass 92 ft

Distance between dynamo or electric motors and steering compass 84 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>8.5</u>	Amperes	<u>12</u>	feet from standard compass	<u>9</u>	feet from steering compass
A cable carrying	<u>.5</u>	Amperes	<u>3</u>	feet from standard compass	<u>3</u>	feet from steering compass
A cable carrying	<u>—</u>	Amperes	<u>—</u>	feet from standard compass	<u>—</u>	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 no degrees on my course in the case of the standard compass and no degrees on my course in the case of the steering compass.

S. A. Thompson Builder's Signature. Date May 28th, 1919.

GENERAL REMARKS.

The installation has been satisfactorily fitted in the vessel, tested at full load and found good.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. J. W. D. 11/6/19. S. H. Davis. Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

1 in. 5. 12. — Transfer