

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 27285

Port of Sunderland Date of First Survey 25 June Date of Last Survey 28 June 18 No. of Visits 2
 No. in 1 on the Iron or Steel "War Spray" Port belonging to London
 g. Book 1 Built at Sunderland By whom Messrs R. Thompson & Son When built 1918.
 Owners The Shipping Controller, 110, Strand, London
 No. 308 Electric Light Installation fitted by Messrs Falconar, Cross & Co. When fitted 1918.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Newcastle-on-Tyne

4 x 5 Open Type Engine coupled direct to a multipolar compound wound 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

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 boards and numbers of fuse switches on each 5-way section Boxes in Saloon passage

steam steer gear 2. 10-way Fuse Boards in:- Engine Room & Saloon

Passage 1. 8-way Fuse Boards in:- aft accomm. 1. Wheel House 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-oxidizable 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 140 arranged in the following groups:-

A Cargo 30 lights each of 16 candle power requiring a total current of 15 Amperes

B Accommodation 42 lights each of 16 candle power requiring a total current of 34 Amperes

C Wireless — lights each of — candle power requiring a total current of 10.5 Amperes

D Navigation 10 lights each of 16 candle power requiring a total current of 5 Amperes

E Engine and Boiler Rooms 22 lights each of 16 candle power requiring a total current of 11 Amperes

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

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

5 Cargo lights of 6-16 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 On Bridge

DESCRIPTION OF CABLES.

Main cable carrying 81.5 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .074 square inches total sectional area

Branch cables carrying 34 Amperes, comprised of 4 wires, each 16 S.W.G. diameter, .022 square inches total sectional area

Branch cables carrying 15 Amperes, comprised of 4 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 38 S.W.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered and armoured and braided cables

Insured copper conductors insulated with pure para

rubber vulcanised india rubber, taped and braided.

Joints in cables, how made, insulated, and protected no joints made

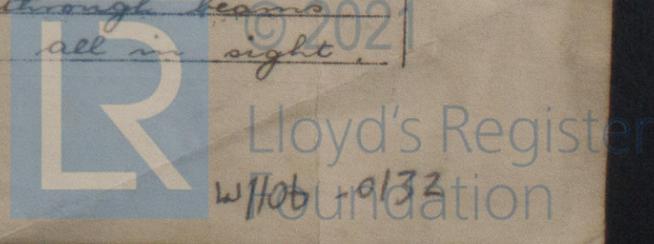
Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — Are all joints in accessible

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 On underside of Decks through beams

and on Bullheads. 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 - armoured cables. Where exposed to weather - led through pipes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Armoured & 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 Brushed holes through bulkheads, &c. Watertight glands

How are cables carried through decks Watertight Deck Pipes

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 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.

Falcon Cross Electrical Engineers Date 8th July 1918.

COMPASSES.

Distance between dynamo or electric motors and standard compass 90 ft.

Distance between dynamo or electric motors and steering compass 85 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		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 no degrees on any course in the case of the standard compass and no degrees on any course in the case of the steering compass.

FOR ROBERT THOMPSON & SONS LTD. Builder's Signature. Date 10th July 1918

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. H.W.D. Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Committee's Minute TUE 16 JUL 1918
Assigned L.M.B. 6.18
F.D.



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN