

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 27088

Port of SUNDERLAND Date of First Survey 18 Oct. Date of Last Survey 5 Nov. 17 No. of Visits 3
 No. in on the Iron or Steel S.S. "Capelcastle" Port belonging to Newport Mon.
 Reg. Book Built at Sunderland By whom R. Thompson & Sons, Ltd When built 1917
 Owners Arthur Capel & Co (Sunderland) Ltd Owners' Address 2 Barpiff
 Yard No. 291 Electric Light Installation fitted by Falconar Crossley When fitted 10/11/1917

DESCRIPTION OF DYNAMO, ENGINE, ETC. Direct coupled Steam driven Generating Set 6 1/2 x 6 Engine

Capacity of Dynamo 90V Amperes at 110V Volts, whether continuous or alternating current continuous

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

Position of Main Switch Board Engine Room having switches to groups 4 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Poop, 4 ways, Engines accom 6, Amidsips accom, 16 Engine Room, 8

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 130 arranged in the following groups:—

A	<u>26</u>	lights each of	<u>16 cp</u>	candle power requiring a total current of	<u>13</u>	Amperes
B	<u>37</u>	lights each of	"	candle power requiring a total current of	<u>18.5</u>	Amperes
C	<u>26</u>	lights each of	"	candle power requiring a total current of	<u>13</u>	Amperes
D	<u>36</u>	lights each of	"	candle power requiring a total current of	<u>18</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	<u>2</u>	Mast head light with	<u>1</u> lamps each of	<u>32</u> candle power requiring a total current of	<u>2</u>	Amperes
	<u>2</u>	Side light with	<u>1</u> lamps each of	" candle power requiring a total current of	<u>2</u>	Amperes
	<u>6</u>	6 ft. Cargo lights of	<u>96</u>	candle power, whether incandescent or arc lights		

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 80V Amperes, comprised of 19 wires, each 16 S.W.G. diameter, .094 square inches total sectional area

Branch cables carrying 18.5 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .027 square inches total sectional area

Branch cables carrying 13 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .025 square inches total sectional area

Leads to lamps carrying 2 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 70 wires, each 28 S.W.G. diameter, .0010 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized India rubbers, taping, Lead covering or steel Armouring & Braiding where necessary

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 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 No

How are the cables led through the ship, and how protected through undersides of main deck through bulkheads, and on Bulkheads.



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 From piping

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Steel wire armouring

What special protection has been provided for the cables near boiler casings do

What special protection has been provided for the cables in engine room do

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

How are cables carried through decks Steel deck tubes.

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 From gas pipe.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coats, 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 By J. J. S. Bond

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.

Galeonias Cross Electrical Engineers

Date Nov 15th 1917

COMPASSES.

Distance between dynamo or electric motors and standard compass about 80 ft

Distance between dynamo or electric motors and steering compass " 90 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>1/2</u>	Amperes	<u>1</u>	feet from standard compass	<u>1</u>	feet from steering compass
A cable carrying	<u>3</u>	Amperes	<u>15</u>	feet from standard compass	<u>15</u>	feet from steering compass
A cable carrying	<u>10</u>	Amperes	<u>20</u>	feet from standard compass	<u>30</u>	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power Yes

For ROBERT THOMPSON & SONS LTD. magnetic error of the standard compass and No degrees on any course in the case of the steering compass.

[Signature] Builder's Signature. Date 19th Nov. 1917

GENERAL REMARKS.

The installation has been fitted on the vessel, tested and found satisfactory.

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

[Signature] 22/11/17

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[Signature]

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

