

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Ipawick Date of First Survey June 10th 1920 Date of Last Survey 27th Jan 1921 No. of Visits 21
 No. in Reg. Book on the ~~Iron~~ Steel S.S. "Emlynton" Port belonging to Cardiff
 Built at Lowestoft By whom John Chambers Ltd When built 1921
 Owners Emlyn Jones & Co Ltd Owners' Address 5 Dock Chambers, Cardiff
 Yard No. 502 Electric Light Installation fitted by Chippendale Ltd, Quetton Broad When fitted 1921.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo + Electrometers Openshaw, Manchester I.K.W. No 27211.
Compound wound 400 Revs.

Capacity of Dynamo 10 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room, Star side Whether single or double wire system is used Double
 Position of Main Switch Board Eng Room, Star Side having switches to groups A. B. C. D of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each For^d Accommodation 2. Panty 2. Eng Room 2.

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 25 arranged in the following groups:—

A	4 accommodation lights each of	30	candle power requiring a total current of	1.2	Amperes
B	5 " lights each of	30	candle power requiring a total current of	1.5	Amperes
C	4 " lights each of	30	candle power requiring a total current of	2.1	Amperes
D	4 Boiler & Eng Room lights each of	30	candle power requiring a total current of	1.2	Amperes
E	lights each of		candle power requiring a total current of		Amperes
1	Mast head light with 1 lamps each of	30	candle power requiring a total current of	.3	Amperes
2	Side lights with 1 lamps each of	30	candle power requiring a total current of	.6	Amperes
2	Cargo lights of	600	candle power, whether incandescent or arc lights	6 amps	

If arc lights, what protection is provided against fire, sparks, &c. No arc lights

Where are the switches controlling the masthead and side lights placed Whelhouse

DESCRIPTION OF CABLES.

Main cable carrying max 10 Amperes, comprised of 4 wires, each 18 S.W.G. diameter, .01254 square inches total sectional area
 Branch cables carrying 6 Amperes, comprised of 4 wires, each 20 S.W.G. diameter, .00705 square inches total sectional area
 Branch cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area
 Leads to lamps carrying 1.8 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 3 wires, each 20 S.W.G. diameter, .00301 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

600 meg N.A. Cable. 7/8" 3/4" 1/2" Steel screwed conduit

Joints in cables, how made, insulated, and protected None.

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 None

How are the cables led through the ship, and how protected Conduit



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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
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Cables not near same
 What special protection has been provided for the cables near boiler casings All at least 2 ft away nearest point
 What special protection has been provided for the cables in engine room Away from hot parts in S conduit
 How are cables carried through beams in S. conduit through bulkheads, &c. W.T. fittings.
 How are cables carried through decks in conduit, then made W.T.
 Are any cables run through coal bunkers No or cargo spaces Yes or spaces which may be used for carrying cargo, stores, or baggage
 If so, how are they protected S conduit & protected by being run in angle of stringer
 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
 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 Main 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.

Chippierfield & Co.

Electrical Engineers

Date January 27th 1921

COMPASSES.

Distance between dynamo or electric motors and standard compass 50 to 60 ft
 Distance between dynamo or electric motors and steering compass 50 to 60 ft.
 The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying <u>3.0</u>	Amperes <u>10</u>	feet from standard compass <u>14</u>	feet from steering compass
<u>Flow & Return</u>			
A cable carrying <u>0.3</u>	Amperes <u>5</u>	feet from standard compass <u>4</u>	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power
 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 JOHN CHAMBERS, Limited

A. Cooper

Builder's Signature.

Date 27.1.21

GENERAL REMARKS.

This installation has been fitted in accordance with the Society's Rules. The materials and workmanship are sound and good. The installation was tried under full load for four hours, afterwards examined, tested, & found satisfactory.

It is submitted that this vessel is eligible for THE RECORD. See Lt Recd 22/1/21

Robert Rae

Surveyor to Lloyd's Register of Shipping.

24111-21-1-Transfer.

Committee's Minute

FRI. 25 FEB. 1921

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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