

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 821.

Port of Adelaide. Date of First Survey 3rd March 1922 Date of Last Survey June 3rd No. of Visits 15No. in Reg. Book on the Steel Screw Steamer "EUWARA" Port belonging to New Castle N.S.WalesBuilt at Osborne Port Adelaide By whom POOLE & STEEL LTD When built 1922Owners Commonwealth Govt Line of Steamers Owners' Address 447 Collins St MelbourneYard No. 2 Electric Light Installation fitted by Newton, McLaren & Co Adelaide When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Vertical Single Cylinder Open type Engine. Direct Coupled to Compound Wound, four pole Dynamo. Dia of Cylinder 7 in Dia x 7 1/2 strokeCapacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current ContinuousWhere is Dynamo fixed Star Side Eng. Room Bot. Platform Whether single or double wire system is used Double wirePosition of Main Switch Board Aft of Bulkhead Eng. Room having switches to groups A, B, C, D, E, F, G of lights, &c., as belowPositions of auxiliary switch boards and numbers of switches on each Fore Peak (no switches) Saloon Pantry (no switches)Passage Outside Wireless Room (no switches) Chart Room (8 switches) Engine Room recess 3 switchesCrews Mess no switches Crews Accommodation (no switches)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

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 50% per cent over the normal currentAre 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 yesAre all switches and fuses constructed of incombustible materials and fitted on incombustible bases yesTotal number of lights provided for 123 Points arranged in the following groups:— 179 LightsA FORE PEAK 7 lights each of 16 candle power requiring a total current of 1 1/2 AmperesB SALOON 31 lights each of 16 candle power requiring a total current of 6 1/2 AmperesC CREWS ACCOM 22 lights each of 16 candle power requiring a total current of 3 1/2 AmperesD MACHINERY SPACE 31 lights each of 16 candle power requiring a total current of 18 AmperesE ENGINEERS ACCOM 18 lights each of 16 candle power requiring a total current of 4 AmperesF 2 Mast head light with 2 lamps each of 32 candle power requiring a total current of 3 Amperes" 2 Side light with 2 lamps each of 32 candle power requiring a total current of 3 Amperes" 10 Cargo lights of 6 Each 96 candle power, whether incandescent or arc lights IncandescentIf arc lights, what protection is provided against fire, sparks, &c. ✓G WIRELESS = 15 AMPERSWhere are the switches controlling the masthead and side lights placed On switchboard in Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 81 Amperes, comprised of 19 wires, each .083 S.W.G. diameter, .094 square inches total sectional areaBranch cables carrying 18 Amperes, comprised of 7 wires, each .036 S.W.G. diameter, .0070 square inches total sectional areaBranch cables carrying 10 Amperes, comprised of 1 wires, each .064 S.W.G. diameter, .0032 square inches total sectional areaLeads to lamps carrying 3 Amperes, comprised of 1 wires, each .044 S.W.G. diameter, .0018 square inches total sectional areaCargo light cables carrying 36 Amperes, comprised of 7 wires, each .064 S.W.G. diameter, .002 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables in Engine Room, Boiler Room, Cargo spaces and where deposited are M.A. 600 Meg. lead covered and braided; all others C.M.A. 600 Meg. lead covered and rubber braided.

Joints in cables, how made, insulated, and protected Joints in Main Cables are in water tight boxesIn cabins by standard porcelain boxesAre 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 yesAre there any joints in or branches from the cable leading from dynamo to main switch board noHow are the cables led through the ship, and how protected Steel armored cables clipped to longitudinal beams in protected positions and where exposed above shelter deck in water pipes

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 All cables lead covered & where liable to damage, armoured and in Iron piping.

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 Do do do

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

How are cables carried through beams Lead lashed holes through bulkheads, &c. Packed 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 Lead covered & Armoured

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 Flexibles How fixed Clipped to bulkheads

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.

For **NEWTON, McLAREN Limited,**

D. Cardley McHaren

Electrical Engineers

Date 4th June 1922

COMPASSES.

Distance between dynamo or electric motors and ^{Managing Officer} standard compass Approximately 100ft

Distance between dynamo or electric motors and steering compass do 90

The nearest cables to the compasses are as follows:—

A cable carrying	<u>5</u>	Amperes	<u>for lighting</u>	<u>5ft</u>	feet from steering compass
A cable carrying	<u>7</u>	Amperes	<u>10</u>	feet from standard compass	<u>5ft</u> feet from steering compass
A cable carrying	<u>Supply to W.P. room</u>	Amperes	<u>20</u>	feet from standard compass	<u>15ft</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 apparent deviation course in the case of the standard compass and no apparent deviation course in the case of the steering compass.

POOLE & STEEL LTD.

Arthur H. Poole

Builder's Signature.

Date 6th June 1922

GENERAL REMARKS.

This Electric Installation has been fitted in accordance with the Rules and found satisfactory under power trial.

Fee 7/12 - 10 0 It is submitted that this vessel is eligible for **THE RECORD, Elec. Light.**

A. A. Tindal

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI, JUL 28 1922



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