

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 70987

Port of *Newcastle on Tyne* Date of First Survey *26th Apr* Date of Last Survey *7th Jun 18* No. of Visits *6*
 No. in Reg. Book *579* on the *Iron or Steel* *S S Sarranac* Port belonging to *London*
 Built at *Hebburn on Tyne* By whom *Palmer & Co* When built *1918*
 Owners *Anglo American Oil Co Ltd* Owners' Address
 Yard No. *863* Electric Light Installation fitted by *Palmer & Co* When fitted *1918*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 In number. *Compound Wound* Dynamos, driven by *2* in number.
2-9"x7" Vertical Engines. Dynamos by *J. H. Holmes & Coy.*
 Capacity of Dynamo *180* Amperes at *100* 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 *Beside Machines* having switches to groups *6* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *✓*

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 *✓* and at each position where a cable is branched or reduced in size *✓* 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 *✓*

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes*

Total number of lights provided for *246* arranged in the following groups:—

A <i>Navigation</i>	lights each of <i>7-8 CP 4-32 CP 1-50</i> candle power requiring a total current of <i>3.3</i>	Amperes
B <i>Engine & Boiler Room</i>	lights each of <i>15-25 CP 4-5-100</i> candle power requiring a total current of <i>7</i>	Amperes
C <i>Forward</i>	lights each of <i>37-25 CP 1-32</i> candle power requiring a total current of <i>11.5</i>	Amperes
D <i>Midships</i>	lights each of <i>94-25 CP 12 Fans</i> candle power requiring a total current of <i>37.2</i>	Amperes
E <i>Aft</i>	lights each of <i>2-8 CP 78-25 CP 2-32</i> candle power requiring a total current of <i>29.5</i>	Amperes
F <i>Masthead</i>	lights each of <i>32</i> candle power requiring a total current of <i>4</i>	Amperes
<i>1</i> Mast head light with <i>1</i> lamps each of <i>32</i>	candle power requiring a total current of <i>4</i>	Amperes
<i>2</i> Side light with <i>1</i> lamps each of <i>32</i>	candle power requiring a total current of <i>.8</i>	Amperes
<i>10 Groups of</i> Cargo lights of <i>125</i>	candle power, whether incandescent or arc lights <i>Incandescent</i>	

If arc lights, what protection is provided against fire, sparks, &c. *✓*

Where are the switches controlling the masthead and side lights placed *In Wheel House*

DESCRIPTION OF CABLES.

Main cable carrying *180* Amperes, comprised of *37* wires, each *.082* S.W.G. diameter, *.2* square inches total sectional area
 Branch cables carrying *10* Amperes, comprised of *19* wires, each *.14* S.W.G. diameter, *.094* square inches total sectional area
 Branch cables carrying *8* Amperes, comprised of *19* wires, each *.16* S.W.G. diameter, *.06* square inches total sectional area
 Leads to lamps carrying *2* Amperes, comprised of *1* wires, each *.18* S.W.G. diameter, *.00181* square inches total sectional area
 Cargo light cables carrying *2* Amperes, comprised of *7* wires, each *.18* S.W.G. diameter, *.0125* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Kanleys Cables 2,500 Meg. grade
VIR lead covered in *Accommodation, Pump, Pools & Navigation, Main, Engine & Boiler Rooms & Crews spaces lead covered & Armoured.*

Joints in cables, how made, insulated, and protected

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

How are the cables led through the ship, and how protected *Main Cables run fore & aft in G.I. Plate guarded at necessary places.*



Lloyd's Register
Foundation

W50-0084

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 Lead Covered & Armoured

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead Covered

What special protection has been provided for the cables near boiler casings None

What special protection has been provided for the cables in engine room Armoured & Lead Covered

How are cables carried through beams Through Bushed Holes through bulkheads, &c. Glands (packed)

How are cables carried through decks Deck Tubes (packed)

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 In bunkers cables ran in pipes, in cargo spaces guarded

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes

If so, how are the lamp fittings and cable terminals specially protected Fittings Heavy with Heavy Covers

Where are the main switches and fuses for these lights fitted In Midship Accommodation

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 Yes

Are any switches, fuses, or joints of cables fitted in the pump room or companion No

How are the lamps specially protected in places liable to the accumulation of vapour or gas Totally enclosed W.T. Fittings

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 2,500 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.

Albert P. Pope Chief Electrical Engineer. Electrical Engineers Date 13. 8. 18.

COMPASSES.

Distance between dynamo or electric motors and standard compass 300 ft.

Distance between dynamo or electric motors and steering compass 130 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	Distance from standard compass	Distance from steering compass
25	Amperes	beside	7 feet
25	Amperes	7 feet	beside
8	Amperes	15 feet	20 feet

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 nil degrees on course in the case of the standard compass and nil degrees on course in the case of the steering compass.

Geo W. Mac Swaine Builder's Signature. Date 13. 8. 18.

GENERAL REMARKS.

The electric lighting installation of this vessel has been fitted in accordance with the rules and satisfactorily tried with all lamps burning.

It is submitted that this vessel is eligible for THE RECORD. ELEC LIGHT

George Murdoch Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.