

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 34337

Port of \_\_\_\_\_ Date of First Survey 29.6.14 Date of Last Survey 29.8.14 No. of Visits 7  
 No. in Reg. Book \_\_\_\_\_ on the Iron or Steel "Cuyahoga" Port belonging to Loudon  
 Built at Greenock. By whom Greenock & Grangemouth D.D. When built 1914  
 Owners Anglo American Oil Co., (?) Owners' Address 34-38 Queen's Lane, Gal. Dortmund  
 Yard No. 358 Electric Light Installation fitted by Sunderland Forge & Eng. Co. Ltd When fitted 1914

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Multipolar compound wound dynamo direct coupled to open inverted type engine  
 both S.F. & E. Co. Ltd.  
 Capacity of Dynamo 150 Amperes at 100 Volts, whether continuous or alternating current Continuous ✓  
 Where is Dynamo fixed Middle platform S. Side of E.R. Whether single or double wire system is used double ✓  
 Position of Main Switch Board close to dynamo having switches to groups six of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each 1 in wheelhouse with switches for all navigation lights

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 100 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 135 arranged in the following groups:—

A	34	lights each of	16	candle power requiring a total current of	19.04	Amperes
B	25	lights each of	16	candle power requiring a total current of	14.0	Amperes
C	7	lights each of	16	candle power requiring a total current of	3.92	Amperes
D	41	lights each of	16	candle power requiring a total current of	22.96	Amperes
E	23	lights each of	16	candle power requiring a total current of	15.63	Amperes
F. Wireless					15.	Amperes
	2	Mast head light with 1 lamps each of 32 c.p. D.F.		candle power requiring a total current of	2.27	Amperes
	2	Side light with lamps each of 32 do.		candle power requiring a total current of	2.27	Amperes
	2	Cargo lights of 8-16 c.p.		candle power, whether incandescent or arc lights	incandscnt	

included in above total

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

None fitted

Where are the switches controlling the masthead and side lights placed In wheelhouse

## DESCRIPTION OF CABLES.

Main cable carrying 90 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area  
 Branch cables carrying 22.96 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area  
 Branch cables carrying 19.07 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0125 square inches total sectional area  
 Leads to lamps carrying 2.24 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .00181 square inches total sectional area  
 Cargo light cables carrying 4.43 Amperes, comprised of 7 wires, each 21 S.W.G. diameter, .0050 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

In berths etc., pure rubber Vulcanised, rubber taped and lead covered, main cables do, do, but V.I.R. covered in place of lead.

Engine & Boilers rooms etc. pure rubber but armoured and braided.

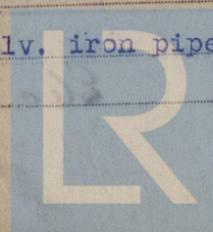
Joints in cables, how made, insulated, and protected

There are 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 No.

How are the cables led through the ship, and how protected Main cables led through 2 galv. iron pipes along for and aft bridge.



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 strong G.I. pipes fitted.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat A & B. cable fitted

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 holes bushed with fibre, through bulkheads, &c. W.T. Glands fitted.

How are cables carried through decks W.T. Deck tubes.

Are any cables run through coal bunkers yes or cargo spaces No or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected in strong iron pipes.

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 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 by special gas tight 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 2500 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.

The Sunderland Forge & Engineering Co., Ltd. Electrical Engineers Date 14th Sept., 1914

COMPASSES.

Distance between dynamo or electric motors and standard compass about 185 feet

Distance between dynamo or electric motors and steering compass about 183 feet

The nearest cables to the compasses are as follows:—

A cable carrying	<u>6.72</u>	Amperes	<u>8</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>.56</u>	Amperes	<u>8</u>	feet from standard compass	<u>led into</u>	feet from steering compass
A cable carrying	<u>.56</u>	Amperes	<u>led into</u>	feet from standard compass	<u>6</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 Nil degrees on \_\_\_\_\_ course in the case of the standard compass and Nil degrees on \_\_\_\_\_ course in the case of the steering compass.

**THE GREENOCK AND GRANGEMOUTH DOCKYARD CO., LD.**

*[Signature]*

Builder's Signature. Date

GENERAL REMARKS.

*Plus installation has been fitted on board under special survey & tested under full working conditions & found satisfactory*

It is submitted that this vessel is eligible for

THE RECORD. Elec. light.

*[Signature]*

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute **GLASGOW 30 SEP. 1914**

*Elec. light*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

