

THU. MAR. 12. 1914

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 65595

Port of Newcastle Date of First Survey 5th Jan 1914 Date of Last Survey 12th Feb 1914 No. of Visits 7  
 No. in on the Iron or Steel SS San Lorenzo Port belonging to London  
 Reg. Book 10344 Built at Newcastle By whom Swan Hunter & Co When built 1914  
 Owners Eagle Oil Transport Co Owners' Address  
 Yard No. 935 Electric Light Installation fitted by Swan Hunter & Co When fitted 1914

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Engine & Dynamo by Clark & Chapman Engine Inverted Type  
Direct-coupled to compound Dynamo multipole with carbon brushes  
 Capacity of Dynamo 11 K W Amperes at 65 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed In Engine Room below aft Whether single or double wire system is used double  
 Position of Main Switch Board besides Dynamo having switches to groups 5 circuits of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each no auxiliary 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 Yes

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 10% 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 porcelain

Total number of lights provided for 172 arranged in the following groups:—

A	26	lights each of	16	candle power requiring a total current of	22.26	Amperes
B	20	lights each of	"	candle power requiring a total current of	17.15	Amperes
C	50	lights each of	"	candle power requiring a total current of	43.5	Amperes
D	44	lights each of	"	candle power requiring a total current of	37.59	Amperes
E	32	lights each of	"	candle power requiring a total current of	27.37	Amperes
2	Mast head light with	1	lamps each of	32	candle power requiring a total current of	1.47
2	Side light with	1	lamps each of	32	candle power requiring a total current of	1.47
	Cargo lights of			candle power, whether incandescent or arc lights		

If arc lights, what protection is provided against fire, sparks, &c. no arc lamps fitted

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

## DESCRIPTION OF CABLES.

Main cable carrying 147.42 Amperes, comprised of 37 wires, each 15 S.W.G. diameter, .15000 square inches total sectional area  
 Branch cables carrying 43.5 Amperes, comprised of 7 wires, each 13 S.W.G. diameter, .04575 square inches total sectional area  
 Branch cables carrying 5.0 Amperes, comprised of 3 wires, each 18 S.W.G. diameter, .0053230 square inches total sectional area  
 Leads to lamps carrying .8 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018100 square inches total sectional area  
 Cargo light cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Heavy galvanized wire lead covered braided vulcanized rubber & cotton tape & pure India rubber

Joints in cables, how made, insulated, and protected no joints in this vessel

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 protected with armour & securely clipped to fore & aft beams



**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible Yes (an open space)

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture  Armour & lead covering Iron piping where necessary

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Same as above

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

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

How are cables carried through beams in fibur ferrules through bulkheads, &c. to 3 glands

How are cables carried through decks in lead or Iron Tubes not less than 18" above decks

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  Armour & lead covering

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 with guarded fittings

Where are the main switches and fuses for these lights fitted In Engine Room

If in the spaces, how are they specially protected guarded covers

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed " How fixed "

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel all double wire

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 Switch board

**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 switches fitted outside

How are the lamps specially protected in places liable to the accumulation of vapour or gas in gas tight fitting

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.

Juan Hunter & Wigham Richardson Electrical Engineers

Date "

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 200 ft-

Distance between dynamo or electric motors and steering compass 194 ft-

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
1.4	8	6	6
1.4	8	6	6
1.4	8	6	6

Have the compasses been adjusted with and without the electric installation at work at full power Yes on day of Trial

The maximum deviation due to electric currents, etc., was found to be nil degrees on all courses in the case of the standard compass and nil degrees on all courses in the case of the steering compass.

SHIPBUILDERS  
WALLSLEY & CO. LTD.  
LONDON, E.C. 4.

Builder's Signature.

Date

7/3/14

**GENERAL REMARKS.**

This installation has been fitted in accordance with the requirements, it has been tried under full power with satisfactory results. In my opinion this vessel is eligible for the record of Elec. Light

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

J.W.D. 12/3/14.

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.