

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 63484

Port of Newcastle on Tyne Date of First Survey 17th Dec 1912 Date of Last Survey 6th Jan 13 No. of Visits 6
 No. in Reg. Book on the Iron or Steel SS. "SAN EDUARDO" Port belonging to London
 Built at Walker Newcastle on Tyne By whom S.H. & W. Richardson When built 1912
 Owners Eagle Oil Transport Co Ltd Owners' Address _____
 Yard No. 878 Electric Light Installation fitted by Swan & Hunter Wallsend When fitted 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Engine & Dynamo by Clark Chapman direct-coupled engine inverted type Dynamo multipole compound with carbon brushes

Capacity of Dynamo 85 Amperes at 65 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed below on after platform in engine room Whether single or double wire system is used double

Position of Main Switch Board besides Dynamo having switches to groups 4 circuits of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each for navigation in chart room

navigation one switch for each light - switches in engine room for engine & boiler room at other places besides lights

If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits _____

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 10% per cent over the normal current

Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases Yes porcelain

Total number of lights provided for 96 arranged in the following groups:—

A	31	lights each of	16	candle power requiring a total current of	26.46	Amperes	
B	18	lights each of	16	candle power requiring a total current of	15.23	Amperes	
C	35	lights each of	16	candle power requiring a total current of	29.45	Amperes	
D	12	lights each of	16	candle power requiring a total current of	10.22	Amperes	
E		lights each of		candle power requiring a total current of		Amperes	
2	Mast head light with	1	lamps each of	32	candle power requiring a total current of	1.47	Amperes
2	Side light with	1	lamps each of	32	candle power requiring a total current of	1.47	Amperes
	Cargo lights of				candle power, whether incandescent or arc lights		

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

Where are the switches controlling the masthead and side lights placed in chart room

DESCRIPTION OF CABLES.

Main cable carrying 82.5 Amperes, comprised of 19 wires, each 13 L.S.G. diameter, .12500 square inches total sectional area

Branch cables carrying 30.0 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .03459 square inches total sectional area

Branch cables carrying 12.0 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .0124600 square inches total sectional area

Leads to lamps carrying .56 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018100 square inches total sectional area

Cargo light cables carrying _____ Amperes, comprised of _____ wires, each _____ L.S.G. diameter, _____ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Heavily armoured with galvanized steel wire lead covering braided vulcanized & pure India rubber

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

Are all the joints of cables thoroughly soldered, resin only having been used as a flux _____ 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 all main runs in piping forward & aft - under center gangway



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 as above & lead covering

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

What special protection has been provided for the cables near boiler casings as above & Iron piping

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

How are cables carried through beams fiber funnels through bulkheads, &c. w/ glands

How are cables carried through decks In Iron or lead tube not less than 18" above deck

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 Iron piping

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 cut outs for these lights fitted

If in the spaces, how are they specially protected

Are any switches or cut outs fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed w/ connection

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

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions no joints

The installation is yes supplied with a voltmeter and yes an amperemeter, fixed on main Board

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas yes

Are any switches, cut outs, 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 Basylguard gas proof

The copper used is guaranteed to have a conductivity of 100 % per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours' immersion in seawater.

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.

Swan - Hunter & W 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

The nearest cables to the compasses are as follows:—

A cable carrying	<u>1.0</u>	Amperes	<u>6</u>	feet from standard compass	<u>8</u>	feet from steering compass
A cable carrying	"	Amperes	"	feet from standard compass	"	feet from steering compass
A cable carrying	"	Amperes	"	feet from standard compass	"	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 all courses in the case of the standard compass and nil degrees on all courses in the case of the steering compass.

DATE 17/1/13 Builder's Signature. Date 17/1/13

GENERAL REMARKS.

This Electric Light Installation has been efficiently fitted on board & tried under working conditions and found satisfactory and the vessel in my opinion is eligible to have the notation of Electric Light made in the Register Book.

W. D. [Signature] Surveyor to Lloyd's Register of British and Foreign Shipping. 20/1/13

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



20.1.13—Transfer.