

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 20006

Port of Glasgow Date of First Survey ✓ Date of Last Survey ✓ No. of Visits ✓
 No. in Reg. Book 1179 on the Iron Steel S. S. Tarquah Port belonging to Liverpool
 Built at Glasgow By whom Messrs. A. Stephen & Sons When built 1902
 Owners Messrs. Elder Dempster & Co. Owners' Address W. H. Allen & Co. Ltd.
 Yard No. 395 Electric Light Installation fitted by W. H. Allen & Co. Ltd. When fitted 1902

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo Compound wound, inverted horse shoe type coupled directly to a Compound vertical engine with cyl. 8" & 13" dia x 8" stroke at 250 Revs.

Capacity of Dynamo 240 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine room starting platform Starboard side

Position of Main Switch Board near dynamo having switches to groups A B C D E F G of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Engine room inside platform
6 switches and saloon pantry 10 switches

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 Yes where double wire

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 100 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 Yes

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

Total number of lights provided for 344 arranged in the following groups:—

A Saloon	36 lights each of	16	candle power requiring a total current of	33.6	Amperes
B Engine room	31	"	"	18.6	"
B Brake hold	7 lights each of	"	candle power requiring a total current of	4.2	Amperes
C 2nd class stateroom	42	"	"	29.4	"
D 1st class stateroom	75 lights each of	"	candle power requiring a total current of	45	Amperes
E Forecastle	17	"	"	10.2	"
F Cargo	22 lights each of	"	candle power requiring a total current of	19.2	Amperes
G Bridge	11	32	"	13.2	"
G Engineers' room	28 lights each of	16	candle power requiring a total current of	22.8	Amperes
G Boiler	21	"	"	12.6	"
2 Mast head light with	1 lamp each of	32	candle power requiring a total current of	2.4	Amperes
2 Side light with	1 lamp each of	32	candle power requiring a total current of	2.4	Amperes
4 Cargo lights of	8-16 =	128	candle power, whether incandescent or are lights	Incandescent	

If are lights, what protection is provided against fire, sparks, &c. no are lights

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

DESCRIPTION OF CABLES.

Main cable carrying 200 Amperes, comprised of 24 wires, each 13 L.S.G. diameter, .250 square inches total sectional area
 Branch cables carrying 45 Amperes, comprised of 19 wires, each 14 L.S.G. diameter, .0462 square inches total sectional area
 Branch cables carrying 19 Amperes, comprised of 4 wires, each 16 L.S.G. diameter, .02224 square inches total sectional area
 Leads to lamps carrying 6 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .00181 square inches total sectional area
 Cargo light cables carrying 48 Amperes, comprised of 145 wires, each 38 L.S.G. diameter, .00405 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Are rubber then vulcanised rubber, rubber coated tape, the whole vulcanised together, then braided cotton and preservative compound

Joints in cables, how made, insulated, and protected Spliced joints soldered & re-insulated with a layer of felt tape built up with several layers of pure rubber tape finished with orokerite tape and varnished

Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 Yes

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 Fore & aft in Starboard alleyway in strong wood casing and from bridge to Forecastle in galvanised iron pipe

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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

Galvanised iron pipe

Lead covered in

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

Lead covered served and armoured

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

Lead covered served and armoured

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

Lead covered served and armoured

How are cables carried through beams

In fibre ferrules

through bulkheads, &c.

In fibre ferrules

How are cables carried through decks

In galvanised iron tubes lined with fibre

Are any cables run through coal bunkers

No

or cargo spaces

No

or spaces which may be used for carrying cargo, stores, or baggage

only baggage

If so, how are they protected

Strong wood casing

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

Baggage room only

If so, how are the lamp fittings and cable terminals specially protected

Strong cast brass guard

Where are the main switches and cut outs for these lights fitted

Engine room

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

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

Brass socket to dynamo pole piece

How are the returns from the lamps connected to the hull

By 1/8" brass screws

Are all the joints with the hull in accessible positions

Yes

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

Are any switches, cut outs, 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 installation is also

supplied with a voltmeter and

and with

an amperemeter, fixed

on switchboard

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 2500 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.

For W. H. ALLEN, SON & Co. Ltd.

C. C. Hawkin

Electrical Engineers

Date June 30. 02

COMPASSES.

Distance between dynamo or electric motors and standard compass

142 Feet

Distance between dynamo or electric motors and steering compass

180 Feet

The nearest cables to the compasses are as follows:—

A cable carrying 10 Amperes 10 feet from standard compass 10 feet from steering compass

A cable carrying 6 Amperes into feet from standard compass 4 into 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 every

course in the case of the

standard compass and

Nil

degrees on

every

course in the case of the steering compass.

Builder's Signature.

Date

GENERAL REMARKS.

This installation has been well fitted on board and examined whilst working found satisfactory

A. M. McLeod

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

Committee's Minute

Glasgow.

14 JUL 1902

Receives "Electric Dept"

It is submitted that this installation appears to be satisfactory.

Lloyd's Register Foundation

15.7.02

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.