

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6534

Port of Belfast. Date of First Survey Sept 2nd Date of Last Survey Oct 17th No. of Visits 19.
 No. in Reg. Book on the Iron or Steel T.S.S. "Tainni" Port belonging to Southampton.
 Built at Belfast. By whom Workman Clark & Co. Ltd When built 1908
 Owners Shaw Saville & Albion C. Ltd. Owners' Address London.
 Yard No. 244 Electric Light Installation fitted by Sunderland Forge & Englo. Ltd When fitted 1908.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 Combined Plants each consisting of open type Compound Engines direct coupled to Compound wound dynamos
 Capacity of Dynamo 350 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Thrust recess. Whether single or double wire system is used single
 Position of Main Switch Board under Dynamos. having switches to groups 22. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Outside 1st class Saloon, Smoke Room and Lounge. Six switches and six fuses on each.

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

Are the cut outs of non-oxidisable 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 800 arranged in the following groups:—

A as per	lights each of	candle power requiring a total current of	Amperes
B attached	lights each of	candle power requiring a total current of	Amperes
C Sheet	lights each of	candle power requiring a total current of	Amperes
D	lights each of	candle power requiring a total current of	Amperes
E	lights each of	candle power requiring a total current of	Amperes
<u>2</u> Mast head light with <u>1</u> lamps each of <u>32</u>		candle power requiring a total current of <u>1.2</u>	Amperes
<u>2</u> Side light with <u>1</u> lamps each of <u>32</u>		candle power requiring a total current of <u>1.2</u>	Amperes
<u>16</u> - Cargo lights of <u>6</u> - <u>16</u>		candle power, whether incandescent or arc lights	

If are lights, what protection is provided against fire, sparks, &c. none fitted

Where are the switches controlling the masthead and side lights placed in Chartroom.

DESCRIPTION OF CABLES.

Main cable carrying 350 Amperes, comprised of 61 wires, each 12 L.S.G. diameter, .149 square inches total sectional area
 Branch cables carrying 35 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .035 square inches total sectional area
 Branch cables carrying 22 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .022 square inches total sectional area
 Leads to lamps carrying 6 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .0035 square inches total sectional area
 Cargo light cables carrying 3.6 Amperes, comprised of 168 wires, each 38 L.S.G. diameter, .005 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Wires insulated with pure and vulcanised India Rubber taped and lead covered.

Joints in cables, how made, insulated, and protected No joints - Distribution box system.

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 no

How are the cables led through the ship, and how protected Main cables lead along Main Deck and alleyways, afterwards through holds. Lead covered and armoured cables used

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

Cable used

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

do

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 bushes through bulkheads, &c.

W. Y. Glands used.

How are cables carried through decks

W. Y. Deck Tubes used.

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

Lead covered and armoured wires used.

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

Strong cast iron covers fitted

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

In Engine Room

If in the spaces, how are they specially protected

none fitted

no

Are any switches or cut outs fitted in bunkers

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

Dynamo earthed to Iron of Generator

13.4

How are the returns from the lamps connected to the hull

by soldered joints.

Are all the joints with the hull in accessible positions

Yes.

The installation is supplied with a voltmeter and

Two

an amperemeter, fixed Main Switchboard

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 copper used is guaranteed to have a conductivity of

98

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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO., L^{TD}.

Electrical Engineers

Date 29th October 1908

COMPASSES.

Distance between dynamo or electric motors and standard compass

150 feet

Distance between dynamo or electric motors and steering compass

150 feet

The nearest cables to the compasses are as follows:—

A cable carrying 6 Amperes feet from standard compass 6 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.

THE WORKING CLARK & CO., LIMITED.

SECRETARY.

Builder's Signature.

Date 6th November 1908

GENERAL REMARKS.

This installation is of good description and has been fitted in accordance with the Rules.

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

Committee's Minute

It is submitted that the Record Elec. Light be noted in the Reg. Book.

Lloyd's Register Foundation

9.11.08

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.