

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 23713

Port of Shull Date of First Survey Apr 10th Date of Last Survey May 4th No. of Visits 8
 No. in on the Iron or Steel Shull Port belonging to Shull
 Reg. Book 36 Supp Built at Overley By whom Cook Nelson & Gummelt When built 1911
 Owners Imperial Steam Fishing Co Ltd Owners' Address _____
 Yard No. _____ Electric Light Installation fitted by Sunderland Forge & Engineering Co Ltd When fitted 1911

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Multi-pole compound wound Dynamo direct coupled to Inverted single cylinder Engine both by Sunderland Forge & Engineering Co
 Capacity of Dynamo 32 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Bottom of engine room Star Side Whether single or double wire system is used double
 Position of Main Switch Board Close to dynamo having switches to groups three of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One in Wheelhouse having switches for 2 side lights, 6 stern light, 2 compass lights, 1 cluster & 7 deck 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 Yes
 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 No 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 56 arranged in the following groups:—
 A 8 lights each of 16 candle power requiring a total current of 4.48 Amperes
 B 5 lights each of 16 candle power requiring a total current of 2.80 Amperes
 C 30 lights each of 16 candle power requiring a total current of 16.80 Amperes
 D 13 lights each of 16 candle power requiring a total current of 7.28 Amperes
 E _____ lights each of _____ candle power requiring a total current of _____ Amperes
 Mast head light with 2 lamps each of _____ candle power requiring a total current of _____ Amperes
 Side light with 10 lamps each of 32 candle power requiring a total current of 2.24 Amperes
 Cargo lights of 16 lamps each 16 candle power, whether incandescent or arc lights continuous

If arc lights, what protection is provided against fire, sparks, &c. None fitted
 Where are the switches controlling the masthead and side lights placed Wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying 21.26 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .0302 square inches total sectional area
 Branch cables carrying 4.48 Amperes, comprised of 1 wires, each 14 L.S.G. diameter, .00503 square inches total sectional area
 Branch cables carrying 16.80 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .0225 square inches total sectional area
 Leads to lamps carrying 26 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .00181 square inches total sectional area
 Cargo light cables carrying 3.36 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .00322 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Eng Berth etc :- Pure rubber, vulcanized rubber Taped & lead covered.
Rest of Ship :- Armoured over lead covering.
 Joints in cables, how made, insulated, and protected None.

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 Lead covered & armoured cables led along inside of Engine room & Storehold casing. Then through bulkhead & in to Captain's room

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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 Strong iron pipes

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

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 Also bushed with fibre for lead on cables through bulkheads, &c. Watertight glands

How are cables carried through decks Watertight 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 No

If so, how are they protected Lead covered & armoured

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

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

The installation is Yes supplied with a voltmeter and Yes an amperemeter, fixed on Forward

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 99 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.

By THE SUNDERLAND FORGE & ENGINEERING CO. LTD.

Wynman Electrical Engineers Date 10th May 1911

COMPASSES.

Distance between dynamo or electric motors and standard compass approx 50 feet

Distance between dynamo or electric motors and steering compass 140

The nearest cables to the compasses are as follows:—

A cable carrying	<u>16.8</u> Amperes	<u>16</u> feet from standard compass	<u>10</u> feet from steering compass
A cable carrying	<u>.56</u> Amperes	<u>8</u> feet from standard compass	<u>10 led into</u> feet from steering compass
A cable carrying	<u>.56</u> Amperes	<u>10 led into</u> feet from standard compass	<u>8</u> feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

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

Builder's Signature. Date

GENERAL REMARKS.

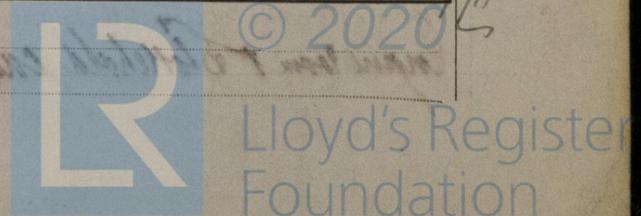
This installation of electric light has been well fitted. The material workmanship are good & have been tested under full working conditions & found satisfactory.

John W. Wynman

this vessel is eligible for ELEC. LIGHT RECORD.

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

Committee's Minute



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.