

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 23325

Port of Sunderland Date of First Survey ✓ Date of Last Survey 15 June 07 No. of Visits ✓
 No. in Reg. Book on the Iron or Steel "Knottingley" Port belonging to Goole 190
 Built at Sunderland By whom J. Brown & Sons. Ltd. When built 1907
 Owners J. & W. Etherall & Co. Owners' Address Goole
 Yard No. Electric Light Installation fitted by Sunderland Forge & Co. Ltd. When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Inverted Vertical open type engine, single cylinder, direct coupled to multipolar compound wound dynamo both by the Sunderland Forge Engineering Co. Ltd.

Capacity of Dynamo 48 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed in Engine Room Whether single or double wire system is used Double

Position of Main Switch Board Near Dynamo having switches to groups two of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches 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-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 56 arranged in the following groups:—

A 15 lights each of 16 candle power requiring a total current of 9 Amperes

B 41 lights each of 16 candle power requiring a total current of 25 Amperes

C 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

Two Mast head light with 1 lamps each of 32 candle power requiring a total current of 2.4 Amperes

Two Side light with 1 lamps each of 32 candle power requiring a total current of 2.4 Amperes

Three Cargo lights of 6 of 16 candle power, whether incandescent or arc lights Incandescent

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

Where are the switches controlling the masthead and side lights placed In Chartroom

DESCRIPTION OF CABLES.

Main cable carrying 34 Amperes, comprised of 4 wires, each 14 L.S.G. diameter, 0.352 square inches total sectional area

Branch cables carrying 9 Amperes, comprised of 4 wires, each 18 L.S.G. diameter, 0.124 square inches total sectional area

Branch cables carrying 25 Amperes, comprised of 4 wires, each 15 L.S.G. diameter, 0.285 square inches total sectional area

Leads to lamps carrying 1.2 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.0181 square inches total sectional area

Cargo light cables carrying 3.6 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, 0.0322 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure rubber, vulcanized rubber, taped and braided, Mains as above run in Iron pipe, Berths as above and lead covered, Engine Room as above and braided.

Joints in cables, how made, insulated, and protected There are 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 No

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 Iron pipes used



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible

No

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture lead covered wire used

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

What special protection has been provided for the cables near boiler casings lead covered and armoured wire used

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

How are cables carried through beams Holes bused through bulkheads, &c. Maktight glands used

How are cables carried through decks Maktight Decktubes used

Are any cables run through coal bunkers No or cargo spaces Yes or spaces which may be used for carrying cargo, stores, or baggage Yes

If so, how are they protected Iron pipes

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

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 an ammeter, fixed on beam bulkhead

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.

THE SONDERLAND FORGE & ENGINEERING CO., LTD.

W. H. G. H. H. H.

Electrical Engineers

Date 19 June 1907

COMPASSES.

Distance between dynamo or electric motors and standard compass

About 150 feet

Distance between dynamo or electric motors and steering compass

" 160 feet

The nearest cables to the compasses are as follows:—

A cable carrying 6 Amperes 12 feet from standard compass 8 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 no degrees on any course in the case of the

standard compass and no degrees on any course in the case of the steering compass.

Per Pro.

JOHN CROWN & SONS LTD.

J. Crown

Builder's Signature.

Date 1st July 1907

GENERAL REMARKS.

This installation appears to comply with the Rules for the record of ELECTRIC LIGHT in the Register Book — and worked satisfactorily.

This installation appears to be in accordance with the Rules.

19.7.07

Committee's Minute

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

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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