

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 24221

Port of Swal. Date of First Survey Aug 12 Date of Last Survey Sept 13 No. of Visits 8
 No. in 4 on the Iron or Steel S/S F.A.C.I. Port belonging to Tangier
 Reg. Book 4 Supp Built at Pelby By whom Lochman & Son When built 1911
 Owners G. Guist Owners' Address Tangier
 Yard No. 499 Electric Light Installation fitted by Cumple & Sherwood When fitted 1911

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Mounted enclosed single cylinder engine direct coupled to a four pole compound wound continuous current dynamo

Capacity of Dynamo 40 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine room near Starboard Whether single or double wire system is used Single

Position of Main Switch Board Close to dynamo having switches to groups Four of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Engine room (4) Chartroom (5)

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 75% 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 29 arranged in the following groups:—

A Engine room - aft lights each of 10 & 16 - 1 & 32 candle power requiring a total current of 6.6 Amperes

B Chartroom lights each of 6 & 16 - 3 & 32 candle power requiring a total current of 6.6 Amperes

C Ind. lights each of 9 & 16 candle power requiring a total current of Amperes

D lights each of Amperes candle power requiring a total current of Amperes

E lights each of Amperes candle power requiring a total current of Amperes

1 Mast head light with 1 lamps each of 32 candle power requiring a total current of Included in B Amperes

2 Side light with 1 lamps each of 32 candle power requiring a total current of 5 Amperes

✓ Cargo lights of ✓ candle power, whether incandescent or arc lights ✓

If arc lights, what protection is provided against fire, sparks, &c. None fitted

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

DESCRIPTION OF CABLES.

Main cable carrying 18 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .035 square inches total sectional area

Branch cables carrying 6.6 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .007 square inches total sectional area

Branch cables carrying 6.6 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .007 square inches total sectional area

Leads to lamps carrying 1.6 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 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.

Lead covered & hardened over vulcanized rubber, lead covered & annealed

Tapes & strands over vulcanized rubber in iron pipes

Joints in cables, how made, insulated, and protected None made

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 & annealed & covered to bulkheads

seams etc by screws with clips & this wire piping is supported

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. Sealed iron pipe

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

5
5.

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

How are cables carried through beams. Lube funnel through bulkheads, &c. Watertight glands

How are cables carried through decks. Watertight deck pipes

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

If so, how are they protected Sealed iron pipe

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 None. 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 supplied with a voltmeter and an amperemeter, fixed in Main Bridge

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 100. per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 1000 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.

Campbell & Inghamwood & Co. Electrical Engineers

Date 13 Oct 1911

COMPASSES.

Distance between dynamo or electric motors and standard compass about 50 ft

Distance between dynamo or electric motors and steering compass about 40 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
55	1	1	1
6	6	6	6
6.6	9	9	9

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 12 degrees on standard compass and 12 degrees on course in the case of the steering compass.

Bochman & Sons

Builder's Signature.

Date 14 Nov 1911

GENERAL REMARKS.

This installation of electric lights has been well fitted. The materials & workmanship are good. It has been tried under full working conditions and found satisfactory.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. JWD 16/11/11

John W. Foyne, Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

