

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 50-119.

Port of Newcastle-on-Tyne Date of First Survey 20th March Date of Last Survey 2nd April 1906 No. of Visits 6
 No. in on the Steel S S Mersey Port belonging to Good
 Reg. Book 1906 Built at Low Walker By whom Messrs Swan Hunter When built 1906
 Owners Lancashire & Yorkshire Railway Co. Owners' Address + Higham Richardson
 Yard No. 752 Electric Light Installation fitted by J. H. Holmes + Co When fitted 1906

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 4"x6" open auto. engine 100 lbs by B L + Co coupled to 15/9.5" compound wound 350 Revs. p.m. by Holmes + Co h/c.

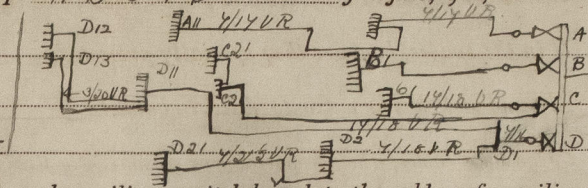
Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine room starting platform starboard Double wire system

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

Positions of auxiliary switch boards and numbers of switches on each

A1 = 6 WAY DP FUSEBOX IN SALOON Pass STARBOARD.
 A11 = 9 " - DO - WHEEL HOUSE WITH 3 SWs FOR SIGNALS
 B1 = 9 " - DO - ENGINE ROOM WITH 6 SWs.
 C1 = 4 " - DO - MESS RM FOR AFTCARGOS + C.
 C2 + C21 = 6 WAY - DO - BOSSING STORE FOR FORD - DO -
 D1 = 2 WAY - DO - (SECTION) INCH ENGINE RM.
 D11 = 9 WAY FUSEBOX IN C.H. ENGINE RM.
 D12 = 4 - DO - STEERING GEAR HO.
 D13 = 4 - DO - MESS RM.
 D14 = 6 - DO - BOSSING STORE
 D15 = 6 - DO - FIREMEN'S F.C. CASTLE



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

yes circuits yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes with about four exceptions where fuses are on one fuse in eng room

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 50 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

yes 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 117 arranged in the following groups :-

A BRIDGE OK + MAIN 24 lights each of 16 candle power requiring a total current of 16.2 Amperes

B ENGINES 25 lights each of 16 candle power requiring a total current of 15.0 Amperes

C CARGO + HOLDS 31 lights each of 16 candle power requiring a total current of 19.8 Amperes

D MAIN DECK 34 lights each of 16 candle power requiring a total current of 22.8 Amperes

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

1 Mast head light with 1 lamp each of 32 candle power requiring a total current of 1.2 Amperes

2 Side lights each with 1 lamp each of 32 candle power requiring a total current of 2.4 Amperes

4 Cargo lights of 4 x 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 Wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 14 L.S.G. diameter, .0945 square inches total sectional area

Branch cables carrying 16.2 Amperes, comprised of 4 wires, each 14 L.S.G. diameter, .0140 square inches total sectional area

Branch cables carrying 22.8 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .0223 square inches total sectional area

Leads to lamps carrying .6 Amperes, comprised of 1 wire, each 18 L.S.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 2.4 Amperes, comprised of 10.8 wires, each 38 L.S.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables are insulated with pure rubber vulcanised taped + braided - in the case of armoured cable galv. iron wire sheathing over taping + braided over all

Joints in cables, how made, insulated, and protected spliced soldered + insulated with approved rubber + protective tapes

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

no 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 From engine room up, casing starboard Ford + aft.

along eng + blr casing in wood casing down for Ford + aft. under main deck

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

overall

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

insulating bushes

through bulkheads, &c.

stuffing boxes

How are cables carried through decks

deck tubes

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

wood casing

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

brass guards over glasses

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

fittings are portable & switch type plugs & sockets used

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

portables

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

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

supplied with a voltmeter and

also

an amperemeter, fixed

on main switch

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 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.

J. H. Holmes & Co

Electrical Engineers

Date Apr 19. 06.

COMPASSES.

Distance between dynamo or electric motors and standard compass

about 48 ft

Distance between dynamo or electric motors and steering compass

" 40 ft

The nearest cables to the compasses are as follows:—

A cable carrying 16.2 Amperes 30 feet from standard compass 22 feet from steering compass

A cable carrying 11.4 Amperes 40 feet from standard compass 32 feet from steering compass

A cable carrying 6.6 Amperes 18 feet from standard compass 9 feet from steering compass

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

ye

The maximum deviation due to electric currents, etc., was found to be

nil

degrees on

the

course in the case of the

standard compass and

nil

degrees on

the

course in the case of the steering compass.

SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

J. H. Holmes & Co

Builder's Signature.

Date 25/4/06

GENERAL REMARKS.

DIRECTOR.

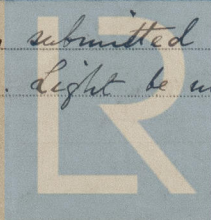
The insulation examined & found satisfactory.

A. G. Pearson.

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 of Shipping

28.4.06

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.