

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 57466

Port of Newcastle-on-Tyne Date of First Survey 10<sup>th</sup> Sept. Date of Last Survey 24 Oct. '09 No. of Visits 6  
 No. in Reg. Book on the Iron or Steel ss. "Steersman" Port belonging to London  
 Built at Newcastle-on-Tyne By whom Wood Skinner & Co. Ltd. When built 1909  
 Owners C Rowbatham & Sons Owners' Address 19 St. Dunstan's Hill, London E.C.  
 Yard No. 102 Electric Light Installation fitted by THE NORTHERN ELECTRICAL ENGINEERING AND PLATING CO. LTD. When fitted 1909  
BOROUGH RD, NORTH SHIELDS.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

"Castle" Dynamo, Foster Engine  
Compound wound  
 Capacity of Dynamo 25 Amperes at 80 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Lower part Engine Room (Starboard Side) Whether single or double wire system is used Double  
 Position of Main Switch Board alongside dynamo having switches to groups 3 main sets of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each An average of two lights per branch switch each branch board fixed as near as possible to each respective light  
 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 25 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, Porcelain & Slate  
 Total number of lights provided for 44 arranged in the following groups:—  
 A { 10 lights each of 16 candle power requiring a total current of 0.2 Amperes  
   five  
 B { 20 lights each of 16 candle power requiring a total current of 0.3 Amperes  
   seven  
 C { 2 lights each of 16 candle power requiring a total current of 9.5 Amperes  
   eight  
 D { lights each of candle power requiring a total current of Amperes  
 E { lights each of candle power requiring a total current of Amperes  
2 Mast head light with 1 lamps each of 22 candle power requiring a total current of 2.5 Amperes  
2 Side light with 1 lamps each of 22 candle power requiring a total current of 2.5 Amperes  
1-64 Cluster Cargo lights of 64 cp. at 16 cp. ea. candle power, whether incandescent or arc lights Incandescent  
 If arc lights, what protection is provided against fire, sparks, &c. No arcs.

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

## DESCRIPTION OF CABLES.

Main cable carrying 24 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, 0.28 square inches total sectional area  
2 Branch cables carrying 4.3 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, 0.24 square inches total sectional area  
1 Branch cables carrying 6.2 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, 0.07 square inches total sectional area  
 Leads to lamps carrying 0.40 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.018 square inches total sectional area  
 Cargo light cables carrying 4.2 Amperes, comprised of 7 wires, each 2 1/2 L.S.G. diameter, 0.048 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Rubber Vulcanised Rubber Taped & Braided  
Engine Room & Deck: Lead Covered & Armoured & in Gal. I. pipe  
Accommodation: — Lead Covered  
 Joints in cables, how made, insulated, and protected No joints

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 Gal. Iron pipes.



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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

Lead Covered & Armoured & Pipes

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

do

through bulkheads, &c.

How are cables carried through decks

Gal. Iron pipes

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

If so, how are they protected

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

permanently

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

now

marine type supplied with a voltmeter and

with

marine type an amperemeter, fixed on

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

not less than 98

per cent. that of pure copper.

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

1600

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.

For THE NORTHERN ELECTRICAL ENGINEERING AND PLATING CO., LTD.

Thomas Harrison

Electrical Engineers

Date 19th Nov 09

COMPASSES.

Distance between dynamo or electric motors and standard compass

Manager.

Distance between dynamo or electric motors and steering compass

80 feet.

The nearest cables to the compasses are as follows:—

A cable carrying

1/2

Amperes

500

feet from standard compass

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

not

degrees on

all

course in the case of the

standard compass and

nd

degrees on

all

course in the case of the steering compass.

WOOD, SKINNER & Co., LIMITED.

James Skinner

Builder's Signature.

Date

17th Nov 09

GENERAL REMARKS.

This installation has been seen & tested on board and when seen working was satisfactory

1m. 87.

blee light.

4.12.09.

A. McKeand

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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