

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 52707

Port of Newcastle-on-Tyne Date of First Survey May 19 Date of Last Survey April 30 No. of Visits 6
 No. in Reg. Book 493 on the Iron or Steel Sh. "Katana" Port belonging to London
 Built at Low Walker By whom Messrs Armstrong Whitworth When built 1904
 Owners Bucknall Bros Ltd Owners' Address London
 Electric Light Installation fitted by Messrs Clarke Chapman & Co Ltd When fitted 1904

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One single cylinder double acting open type vertical Engine
Coupled direct to a continuous current compound wound dynamo
 Capacity of Dynamo 120 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine room, Bottom platform, Star Whether single or double wire system is used Double wire
 Position of Main Switch Board near dynamo having switches to groups A. B. C. D. E. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each each light & groups of lights
provided with switches as required.

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 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 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, slate & ambrion

Total number of lights provided for 166 arranged in the following groups :-

| Group | Number of lights | Each of | Candle power | Requiring a total current of | Amperes |
|-------|-------------------------------------|----------------|--------------|------------------------------|---------|
| A | 15 | lights each of | 16 | 9 | |
| B | 33 | lights each of | 16 | 19.8 | |
| C | 55 | lights each of | 16 | 35 | |
| D | 34 | lights each of | 16 | 40.2 | |
| E | 26 | lights each of | 16 | 15.6 | |
| 2 | Mast head light with 1 lamp each of | 32 | | 2.4 | |
| 2 | Side light with 1 lamp each of | 32 | | 2.4 | |
| 10 | Cargo lights of each | 8-16 | | | |

candle power, whether incandescent or arc lights incandescent.

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

DESCRIPTION OF CABLES.

| Carrying | Amperes | Comprised of | Wires | Each | L.S.G. diameter | Square inches total sectional area |
|--------------------|---------|--------------|-------|---------|-------------------------|------------------------------------|
| Main cable | 120 | 34 | wires | each 16 | L.S.G. diameter, .1168 | square inches total sectional area |
| Branch cables | 19.8 | 4 | wires | each 16 | L.S.G. diameter, .0221 | square inches total sectional area |
| Branch cables | 9 | 4 | wires | each 18 | L.S.G. diameter, .0124 | square inches total sectional area |
| Leads to lamps | 6 | 1 | wires | each 18 | L.S.G. diameter, .0018 | square inches total sectional area |
| Cargo light cables | 4.8 | 146 | wires | each 38 | L.S.G. diameter, .00507 | square inches total sectional area |

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized rubber taped & Braided, lead covered overall and where exposed steel armoured over the lead covering
 Joints in cables, how made, insulated, and protected no joints except mechanical ones.
 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 made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage yes, 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 Lead covered steel armoured, clipped to underside of deck with strong clips.



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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
and Steel armoured

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 "

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

How are cables carried through beams in lead bushes through bulkheads, &c. in watertight glands

How are cables carried through decks in galvanized iron watertight 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 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 —

Cargo light cables, whether portable or permanently fixed Portable How fixed in Cast iron W.T. Boxes

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel Double wire System

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 supplied with a voltmeter and also an amperemeter, fixed in 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 100 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.

W. Walker Director Electrical Engineers Date April 26th 07

COMPASSES.

Distance between dynamo or electric motors and standard compass 110 feet

Distance between dynamo or electric motors and steering compass 100 "

The nearest cables to the compasses are as follows:—

| | | | |
|------------------|-------------------|--------------------------------------|--------------------------------------|
| A cable carrying | <u>.6</u> Amperes | <u>12</u> feet from standard compass | <u>6</u> feet from steering compass |
| A cable carrying | <u>.6</u> Amperes | <u>6</u> feet from standard compass | <u>12</u> 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 nil degrees on all course in the case of the standard compass and nil degrees on all course in the case of the steering compass.

For SIR W. G. ARMSTRONG, WHITWORTH & CO. LTD. Builder's Signature. Date 30/4/07

GENERAL REMARKS. P. Saxon White This installation has been examined and as far as could be seen found satisfactory

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

Committee's Minute —

It is submitted that the Record Rec. Light be noted in the Log Book.



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 1. A.—5m.54.