Rpt. 13.

TUES. 28 MAY 1907

Received at London Office 19

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 25226

Port of Glasgow Date of First Survey 16th April Date of Last Survey 1st May No. of Visits 6

No. in Reg. Book ..... on the Iron or Steel "Kazembe" Port belonging to .....

Built at ..... By whom A. Hepburn & Sons When built 1907

Owners Buchanan Bros Owners' Address .....

Yard No. 421 Electric Light Installation fitted by J. A. Holmes & Co. When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

8¼" + 6" Open Auto: Engine 20 B.H.P. 275 Revs. D. F. Lubrication
17 | 7¾ Dynamo Compound 130 Amps 100 Volts 275 Revs.

Capacity of Dynamo 130 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starting Platform Whether single or double wire system is used Double

Position of Main Switch Board New dynamo room 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 9 Way D.P. in Lamp room, 12 Way D.P. in Chart house, 6 Way D.P. in stewards room, 9 Way D.P. in Pantry, 12 Way D.P. in Pantry store, 9 Way D.P. in Mess room, 9 Way D.P. in 2nd Off: room, 9 Way D.P. in steering gear room, 9 Way in Forecastle Cath, 6 Way in Engine room.

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 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

Total number of lights provided for 201 arranged in the following groups :—

A Engine room 15 lights each of 16 candle power requiring a total current of 8·4 Amperes
B Aft 27 lights each of 16 candle power requiring a total current of 15·12 Amperes
C Engineers quarters 44 lights each of 16 candle power requiring a total current of 24·64 Amperes
D Forward 42 lights each of 16 candle power requiring a total current of 23·52 Amperes
E Saloon 73 lights each of 16 candle power requiring a total current of 40·88 Amperes
2 Mast head lights with 1 lamps each of 32 candle power requiring a total current of 1·12 Amperes
2 Side lights with 1 lamps each of 32 candle power requiring a total current of 2·24 Amperes
12 Cargo lights of 8 + 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 .....

DESCRIPTION OF CABLES.

2 Main cables carrying 112·5 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .0612 square inches total sectional area
Branch cables carrying 40·8 Amperes, comprised of 19 wires, each 17 L.S.G. diameter, .0467 square inches total sectional area
Branch cables carrying 24·6 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, .0285 square inches total sectional area
Leads to lamps carrying ·56 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .00181 square inches total sectional area
Cargo light cables carrying 4·48 Amperes, comprised of 7 wires, each 21·5 L.S.G. diameter, .0049 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Para rubber vulcanized rubber + taped + lead covered in cabins &c
" " " " " " " " + armoured
in holds machinery spaces &c.

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

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 .....

Are there any joints in or branches from the cable leading from dynamo to main switch board .....

How are the cables led through the ship, and how protected Armoured + L.C. clipped in holds &c
Lead covered clipped in cabins &c.

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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 Armd - L. C.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat " "

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 fibre 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 Armoured - L C.

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 No

Cargo light cables, whether portable or permanently fixed Portable *How fixed* W.T. sockets

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* not *an amperemeter, fixed* Main board

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 2000 *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.

Electrical Engineers *Date* 15/5/07

COMPASSES.

Distance between dynamo or electric motors and standard compass 120 ft

Distance between dynamo or electric motors and steering compass 125 "

The nearest cables to the compasses are as follows :—

A cable carrying 8·41 *Amperes* 12 ft. *feet from standard compass* 17 ft. *feet from steering compass*

A cable carrying ·56 *Amperes* 2 " *feet from standard compass* 7 " *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 *degrees on* *course in the case of the standard compass and* *degrees on* *course in the case of the steering compass.*

Alex Stephen & Sons Ltd.
Alex Scott, Secy. *Builder's Signature.* *Date* 17th May 1907.

GENERAL REMARKS. The Insulation of this vessel was fitted on board under survey & tested under working conditions with satisfactory results.

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

Committee's Minute Glasgow 27 MAY 1907. It is submitted that the Record Elec. Light be noted in the Reg. Book.
Record : Electric Light
Award

29.5.07

REPORT FORM ... 1...—2m.3.4.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.