

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 22846

Port of Hull Date of First Survey Jun 11 Date of Last Survey 12th Sept. No. of Visits 14
 No. in Reg. Book 86 on the ~~Iron~~ Steel Se. S. Accrington Port belonging to Grimby
 Built at Hull By whom Messrs Earles & Co. Ltd When built 1910
 Owners Great Central Railway Owners' Address Grimby
 Yard No. 565 Electric Light Installation fitted by Messrs Clarke Chapman & Co. Ltd When fitted 1910

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Single Cylinder double acting open type vertical engine. direct coupled to a continuous current compound wound dynamo
 Capacity of Dynamo 273 Amperes at 55 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used double
 Position of Main Switch Board near Dynamo having switches to groups A.B.C.D.E.F.G. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Each light, and group of lights provided with switches as necessary.

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 & porcelain

Total number of lights provided for 110 + 2 Cargo lamps arranged in the following groups :-

A	<u>25</u> lights each of <u>16</u>		candle power requiring a total current of	<u>41.5</u>	Amperes
B	<u>24</u> lights each of <u>5</u>		candle power requiring a total current of	<u>39.3</u>	Amperes
C	<u>32</u> lights each of <u>5</u>		candle power requiring a total current of	<u>38.2</u>	Amperes
F	<u>27</u> lights each of <u>16</u>		candle power requiring a total current of	<u>29.5</u>	Amperes
D	<u>28</u> lights each of <u>16</u>		candle power requiring a total current of	<u>30.5</u>	Amperes
E	<u>31</u> lights each of <u>16</u>		candle power requiring a total current of	<u>48</u>	Amperes
	<u>25</u> lights each of <u>32</u>		candle power requiring a total current of	<u>46</u>	Amperes
2	Mast head light with <u>1</u> lamps each of <u>32</u>		candle power requiring a total current of	<u>2.2</u>	Amperes
2	Side light with <u>1</u> lamps each of <u>32</u>		candle power requiring a total current of	<u>2.2</u>	Amperes
2	Cargo lights of each <u>200</u>		candle power, whether incandescent or arc lights	<u>Incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. No arc lights fitted

Where are the switches controlling the masthead and side lights placed In 2nd Officer's Room

DESCRIPTION OF CABLES.

Main cable carrying 273 Amperes, comprised of 37 wires, each 101 L.S.G. diameter, 3000 square inches total sectional area
 Branch cables carrying 30 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, 03457 square inches total sectional area
 Branch cables carrying 7 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, 0070 square inches total sectional area
 Leads to lamps carrying 11 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 00181 square inches total sectional area
 Cargo light cables carrying 12 Amperes, comprised of 105 wires, each 0124 L.S.G. diameter, 01246 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised india rubber, taped and braided and lead covered in accommodation, steel armoured where exposed.

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 Clipped to underside of deck, lead covered and armoured.

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 armoured ✓
What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead + armoured ✓
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 Lead Covered Cables in bunks armoured cables, holes not banded through bulkheads, &c. watertight glands ✓
How are cables carried through decks in Galvanised iron 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 Lead covered and armoured ✓
Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage No Yes ✓
If so, how are the lamp fittings and cable terminals specially protected Brass guarded fittings ✓
Where are the main switches and cut outs for these lights fitted above deck in suitable places ✓
If in the spaces, how are they specially protected Metal covers ✓
Are any switches or cut outs fitted in bunkers No
Cargo light cables, whether portable or permanently fixed Portable ✓ How fixed to W.Y. Connection Boxes ✓
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 supplied with a voltmeter and also an amperemeter, fixed on switch 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 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.

For Clarke, Chapman & Co. Ltd
W. Woodson Director Electrical Engineers Date Sept. 8th 1910.

COMPASSES.

Distance between dynamo or electric motors and standard compass 80 ft.
Distance between dynamo or electric motors and steering compass 42 ft.
The nearest cables to the compasses are as follows:—
A cable carrying 1/1 Amperes is led into feet from standard compass and 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 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.

Builder's Signature. Date

GENERAL REMARKS. The Electric Light Installation on this vessel has been fitted as above, tested and found satisfactory, and is now respectfully submitted for notation in the Registrar's Book for THE RECORD. Elec. light. JWD 15/9/10 JMM
James Barclay Surveyor to Lloyd's Register of British and Foreign Shipping

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

