

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 28352

Port of Hull Date of First Survey 3-2-15 Date of Last Survey 15-2-15 No. of Visits 4
 No. in Reg. Book 12 on the ~~Iron~~ Steel S.T. ST DENIS Port belonging to Hull
 Built at Selby By whom Messrs Cochrane & Sons When built 1914
 Owners' Address St Andrews Dock Hull
 Owners Thomas Hamling & Co. Ltd THE HUMBER ELECTRIAL ENGINEERING CO. When fitted
 Yard No. 623 Electric Light Installation fitted by

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Robey Engine 4 1/2 x 4. Speed 400 R.P.M. direct coupled to
J.H. Holmes. Treacelle. Dynamo
 Capacity of Dynamo 30 Amperes at 100 Volts, whether continuous or alternating current yes
 Where is Dynamo fixed Starboard Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board Starboard Engine Room having switches to groups 3 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One 5 way on Board cabin entrance.
One 3 way Engine Room. One 10 way Wheelhouse. One 5 way Treacelle
 If fuses are fitted on main switch board to the cables of main circuit No 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits
 Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 25% per cent over the normal current
 Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases Yes
 Total number of lights provided for 50 arranged in the following groups:—
 A 11 lights each of 16 candle power requiring a total current of 6.6 Amperes
 B 6 lights each of 16 candle power requiring a total current of 3.6 Amperes
 C 13 lights each of 16 candle power requiring a total current of 7.8 Amperes
 D 21 lights each of 16 candle power requiring a total current of 12.6 Amperes
 E lights each of candle power requiring a total current of Amperes
3 Mast head light with 1 lamps each of 32 candle power requiring a total current of 3.6 Amperes
2 Side light with 1 lamps each of 32 candle power requiring a total current of 2.4 Amperes
1 Cargo lights of 5-16 candle power, whether incandescent or arc lights
 If arc lights, what protection is provided against fire, sparks, &c. No Arcs

Where are the switches controlling the masthead and side lights placed Wheel house

DESCRIPTION OF CABLES.

Main cable carrying 30 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area
 Branch cables carrying 13 Amperes, comprised of 3 wires, each 18 S.W.G. diameter, .0053 square inches total sectional area
 Branch cables carrying 8 Amperes, comprised of 5 wires, each 20 S.W.G. diameter, .003 square inches total sectional area
 Leads to lamps carrying .6 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 130 wires, each 40 S.W.G. diameter, .0024 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Herby's 600 52 grade Bathe.
Lead covered in cabin & wheel house
Lead covered and Armoured with galvanized iron tubes in all parts
 Joints in cables, how made, insulated, and protected No Joints
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — 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 Lead covered & armoured clipped up with galvanized iron clip to steel work



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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 & 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 *Lead & Armoured*

What special protection has been provided for the cables in engine room *Lead & Armoured*

How are cables carried through beams *clear holes, bucked for the through bulkheads, &c. Booms & Glants*

How are cables carried through decks *Deck pipes*

Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected *Lead & Armoured*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *No! Tisk Room*

If so, how are the lamp fittings and cable terminals specially protected

Where are the main switches and fuses for these lights fitted *Forecastle*

If in the spaces, how are they specially protected

Are any switches or fuses fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable* 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

Is the installation supplied with a voltmeter *Yes*, and with an amperemeter *Yes*, fixed *Two Switchboard*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, fuses, 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 that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than *600* megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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.

THE HUMBER ELECTRICAL ENGINEERING CO.,

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *40 feet*

Distance between dynamo or electric motors and steering compass *36 feet.*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>3</i>	<i>30</i>		
<i>3</i>	<i>30</i>		

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.

FOR COCHRANE & SONS LTD.

J. M. Cochrane

Builder's Signature.

Date

GENERAL REMARKS.

This installation of electric light has been well fitted the materials & workmanship are good, it has been tried under full working conditions & found satisfactory

It is submitted that this vessel is eligible for

THE RECORD Elec. light.

JWD 17/3/15

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

Committee's Minute FRI. MAR. 19. 1915

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.