

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 28528

Port of Hull Date of First Survey 21. 4. 15 Date of Last Survey 5. 5. 15 No. of Visits 6  
 No. in Reg. Book 96. on the Iron or Steel ss. Colleur Port belonging to Fleetwood  
 Built at Selly. By whom Cochrane & Co Ltd When built 1915.  
 Owners Messrs. J. Mass & Co Ltd Owners' Address Fleetwood  
 Yard No. 652. Electric Light Installation fitted by Humber Electrical Co When fitted Aug. 1915.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Sisson Enclosed Engine 5" x 3' direct coupled to Dynamo by  
Phoenix Dynamo Co Bradford speed 600 R.P.M.  
 Capacity of Dynamo 50 Amperes at 65 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Starboard E. Room Whether single or double wire system is used both  
 Position of Main Switch Board Starboard E. Room having switches to groups Three of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each 1- 3 way Forecastle 1- 10 way Wheelhouse  
1- 3 way Engine Room 1- 5 way Cabin Entrance Aft

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 49-16 CP arranged in the following groups:—

A	<u>9</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>8.8</u>	Amperes
B	<u>19</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>18.3</u>	Amperes
C	<u>11</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>10.5</u>	Amperes
D	<u>17</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>9.8</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	<u>3</u>	Mast head light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>6</u>	Amperes
	<u>2</u>	Side light with <u>1</u> lamps each of	<u>16</u>	candle power requiring a total current of	<u>2</u>	Amperes
	<u>1</u>	Cargo lights of	<u>5. 16</u>	candle power, whether incandescent or arc lights	<u>4. 8</u>	

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

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

## DESCRIPTION OF CABLES.

Main cable carrying	<u>46</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>16</u>	S.W.G. diameter,	<u>.022</u>	square inches total sectional area
Branch cables carrying	<u>20</u>	Amperes, comprised of	<u>3</u>	wires, each	<u>18</u>	S.W.G. diameter,	<u>.0053</u>	square inches total sectional area
Branch cables carrying	<u>12</u>	Amperes, comprised of	<u>3</u>	wires, each	<u>20</u>	S.W.G. diameter,	<u>.003</u>	square inches total sectional area
Leads to lamps carrying	<u>2</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>18</u>	S.W.G. diameter,	<u>.0018</u>	square inches total sectional area
Cargo light cables carrying	<u>5</u>	Amperes, comprised of	<u>140</u>	wires, each	<u>36</u>	S.W.G. diameter,	<u>.0024</u>	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized India Rubber Lead covered & Armoured with  
Galvanized Iron wire  
Henleys Cable  
 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 Clipped up to Steel work etc by galvanized & Bran  
Clips



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

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

How are cables carried through beams

Clear Hole Lead Bules

through bulkheads, &c.

Brass Glands

How are cables carried through decks

Deck Pipes

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 Armoured

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage

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

Where are the main switches and fuses for these lights fitted

If in the spaces, how are they specially protected

No

Are any switches or fuses fitted in bunkers

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

main 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 500 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 HUNTER ELECTRICAL ENGINEERING CO. PROPRIETOR

W. E. Shuttleworth

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass

About 46 feet

Distance between dynamo or electric motors and steering compass

About 40 feet

The nearest cables to the compasses are as follows:—

A cable carrying

2

Amperes

to

feet from standard compass

feet from steering compass

A cable carrying

2

Amperes

to

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

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.

A. Cochrane

Builder's Signature.

Date

GENERAL REMARKS.

This installation of electric light has been well fitted. The materials and workmanship are good. It has been tried under full working conditions and found satisfactory.

It is submitted that this vessel is eligible for THE RECORD Elec. light.

J. G. Mackillop

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

Committee's Minute