

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 28864

Port of Hull Date of First Survey 21.8.15 Date of Last Survey 3.9.15 No. of Visits 6

No. in Reg. Book 1124 on the Iron or Steel Tribune Port belonging to Grimsby

Built at Felby By whom Cochrane Bros Ltd When built 1915-9

Owners Anchor Line Fishing Co Ltd Owners' Address Grimsby

Yard No. 639 Electric Light Installation fitted by Northern Electrical Co When fitted 1915-9

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

Enclosed Steam Engine direct coupled to 2 pole Dynamo

Capacity of Dynamo 44 Amperes at 65 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starboard Side Engine Room Whether single or double wire system is used Double

Position of Main Switch Board near Engine having switches to groups Two of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Distribution in Wheel House with Switches

If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits Yes

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 50 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 16 lights each of 16 candle power requiring a total current of 14 Amperes

B 5 lights each of 32 candle power requiring a total current of 30 Amperes

C 29 lights each of 16 & 25 candle power requiring a total current of 30 Amperes

D lights each of candle power requiring a total current of 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 Included Amperes

2 Side light with 1 lamps each of 32 candle power requiring a total current of above Amperes

2 Cargo lights of 2/16 each 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 In wheel House

### DESCRIPTION OF CABLES.

Main cable carrying 44 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, .06 square inches total sectional area

Branch cables carrying 30 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area

Branch cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area

Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 4 Amperes, comprised of 110 wires, each 38 S.W.G. diameter, .0032 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

Yule India Rubber Taped & Braided run in Galvanized Steel tubing

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

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 Galvanized Steel Tubing



**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 Galvanized Steel

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat G.S. Luting

What special protection has been provided for the cables near boiler casings ditto

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

How are cables carried through beams ditto through bulkheads, &c. ditto

How are cables carried through decks ditto

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

If so, how are they protected G.S. Luting

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 fuses for these lights fitted ✓

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 on 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.

Northern Electrical Co Electrical Engineers Date 12 Oct 1915

**COMPASSES.**

Distance between dynamo or electric motors and standard compass Phantom

Distance between dynamo or electric motors and steering compass about 36 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>1</u> Amperes	<u>about 5</u> feet from standard compass	<u>0</u> 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 courses in the case of the standard compass and nil degrees on all course in the case of the steering compass.

For COCHRANE & SONS LTD.

J.H. Cochrane Builder's Signature. Date 15/10/1915.

GENERAL REMARKS. This vessel has been fitted with an electric light installation as above the workmanship is good on completion it was tested under full working conditions found satisfactory

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

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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