

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 10,321

Description of Grimsby Date of First Survey 4/7 Date of Last Survey 8/8/16 No. of Visits 6
 on the Iron or Steel T. Wyndham Port belonging to Grimsby
 Built at Lech By whom Cochrane & Sons When built 1916
 Length 719 Owners' Address Grimsby
 Electric Light Installation fitted by Northern Electrical Co. When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Enclosed steam engine direct coupled to two pole protected type dynamo.
 Capacity of Dynamo 444 Amperes at 65 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed In 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 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each in wheel house 8 switches

Yes 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
 Are the fuses of non-oxidisable 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 yes
 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

Rods 10/12 Total number of lights provided for 444 arranged in the following groups:—
 Propeller 28 lights each of 16 candle power requiring a total current of 16 Amperes
 Bolts 11/7/16 lights each of 32 candle power requiring a total current of 30 Amperes
8/8/16 lights each of 16 candle power requiring a total current of 30 Amperes
 lights each of 16 candle power requiring a total current of 30 Amperes
 lights each of 16 candle power requiring a total current of 30 Amperes
 lights each of 16 candle power requiring a total current of 30 Amperes
 Mast head light with 1 lamps each of 32 candle power requiring a total current of Included in above Amperes
 Side light with 1 lamps each of 32 candle power requiring a total current of " " Amperes
 Cargo lights of 4 candle power, whether incandescent or arc lights
 Are 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 444 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 16 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.

Vulcanized india rubber Taped & braided cables led through galvanized steel tubing. In chart room & cabin mess room in wood on casing
 Joints in cables, how made, insulated, and protected None made.

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 ✓
 How are the cables led through the ship, and how protected galvanized steel tubes.

WS16-0176



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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 pipings

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 pipings through bulkheads, &c. made

How are cables carried through decks do

Are any cables run through coal bunkers yes or cargo spaces ✓ or spaces which may be used for carrying ✓

If so, how are they protected ✓

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 no

Cargo light cables, whether portable or permanently fixed portable How fixed no

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel no

How are the returns from the lamps connected to the hull no

Are all the joints with the hull in accessible positions no

Is the installation supplied with a voltmeter yes and with an amperemeter yes

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 vapour or gas no

Are any switches, fuses, or joints of cables fitted in the pump room or companion no

How are the lamps specially protected in places liable to the accumulation of vapour or gas no

The copper used is guaranteed to have a conductivity of not less than that of the English standard and the wires are protected by tinning from the sulphur compounds present in the atmosphere.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms after 24 hours' immersion in water, the test being made after one minute's immersion and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation and that it is at this date in good order and safe working condition.

THE NORTHERN ELECTRICAL CO.

COMPASSES.

Distance between dynamo or electric motors and standard compass About 4

Distance between dynamo or electric motors and steering compass 3

The nearest cables to the compasses are as follows:—

A cable carrying	1	Amperes	5	feet from standard compass
A cable carrying	30	Amperes	11	feet from standard compass
A cable carrying		Amperes		feet from standard 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 standard compass and nil degrees on any course in the case of the steering compass.

H. S. Johanneesen, Bangor, Alaska

Builder's Signature

Date Aug 22nd 1916

GENERAL REMARKS.

This installation of electric light has been well fitted. The material workmanship are good. The installation has been tried under full working conditions with satisfactory results.

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

J.R.K.

Amartell

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

Committee's Minute TUE. 29 AUG. 1916