

WED. FEB. 21 1921

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 32416

Port of Hull. Date of First Survey 5.1.21 Date of Last Survey 15.1.21 No. of Visits 6  
 No. in Reg. Book on the Iron or Steel S. T. MARGRET LOCKINGTON. Port belonging to  
 Built at Self By whom Belmore & Son. When built 1921  
 Owners Electric Light Installation fitted by Humber Electric Co. Ltd. When fitted 1921.  
 Yard No. 747.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Open type engine coupled to 4 pole compound wound dynamo  
all on combined bedplate.

Capacity of Dynamo 25 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed At the side engine room. Whether single or double wire system is used Double.

Position of Main Switch Board At the side engine room. Having switches to groups 3 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each one 8 way Wheelhouse  
one 3 way Forecastle one 3 way Engine Room on Main Switchboard.

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

Are the fuses of non-oxidisable 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, 16 CP. arranged in the following groups:—

Group	Number of lights	Each of	Candle power	Requiring a total current of	Amperes
A	5	lights each of 16		3	Amperes
B	13	lights each of 16		8	Amperes
C	10	lights each of 16		3	Amperes
D	2	lights each of 16		1	Amperes
E	1	lights each of 32		1	Amperes
	2	Mast head light with 1 lamps each of 32		2	Amperes
	2	Side light with 1 lamps each of 32		2	Amperes
	2	Cargo lights of 4, 16 CP each			

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.

Cable Description	Amperes	Comprised of	Wires	Each	S.W.G. diameter	Square inches total sectional area
Main cable carrying	25		7	wires, each 14	.035	square inches total sectional area
Branch cables carrying	5		3	wires, each 20	.0030	square inches total sectional area
Branch cables carrying	8		3	wires, each 20	.0030	square inches total sectional area
Leads to lamps carrying	5		1	wires, each 18	.0018	square inches total sectional area
Cargo light cables carrying	2		10/40	wires, each	.00166	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered in cabins & berths. Lead covered & amoured to all other positions.

Joints in cables, how made, insulated, and protected No joints in any cable.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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

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 Lead covered & amoured. Clipped to steelwork by galvanized iron clips

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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 covered & amoured.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & amoured.*

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 bushed.* through bulkheads, &c. *Brass glands.*

How are cables carried through decks *Leak 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 *Yes*

If so, how are they protected *Lead covered amoured.*

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 *Main Terminal.*

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 HUNTER ELECTRICAL ENGINEERING CO

Electrical Engineers

Date

COMPASSES.

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

Distance between dynamo or electric motors and steering compass *40 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>.2</i>	<i>To</i>	<i>feet from standard compass</i>	<i>feet from steering compass</i>
<i>.2</i>	<i>To</i>	<i>feet from standard compass</i>	<i>feet from steering compass</i>
<i></i>	<i></i>	<i>feet from standard compass</i>	<i>feet from steering compass</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 *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.

FOR COCHRANE & SONS, LTD.

Builder's Signature. Date

GENERAL REMARKS.

*The workmanship and materials are good. On completion the installation was tried under full load with satisfactory results. It is submitted that this vessel is eligible for THE RECORD. Elected Light Bell. 2/1/21*

*Fee £2-10-0*

*applied for 27/1/21 M. R.*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.