

TUE. 9 OCT. 1917

Received at London Office

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 30,165

Port of Hull Date of First Survey 3.9.17 Date of Last Survey 26-9-17 No. of Visits 6  
 No. in Reg. Book 1616 on the ~~Iron~~ Steel 1. hauler "Cornellian" Port belonging to Hull  
 Built at Leby By whom Cochrane & Sons Ltd When built 1917-9  
 Owners Kingston Iron Working Co Ltd Owners' Address St Andrews Dock Hull  
 Yard No. 675 Electric Light Installation fitted by Humber Electrical Co Ltd When fitted 1917-9

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Roby high pressure inverted engine, enclosed type, coupled direct to  
Holmes compound wound dynamo  
 Capacity of Dynamo 70 Amperes at 65 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Engine room starboard side Whether single or double wire system is used double  
 Position of Main Switch Board new dynamo having switches to groups three of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each one 3 way in Forecastle, one 12 way in  
wheel house, one 3 way in Engine room, one 5 way in cabin aft.

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-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 64 arranged in the following groups:—

A	10	lights each of	16	candle power requiring a total current of	9	Amperes
B	25-3	lights each of	32	candle power requiring a total current of	32	Amperes
C	11	lights each of	16	candle power requiring a total current of	10	Amperes
D	13	lights each of	16	candle power requiring a total current of	11.8	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 in Amperes
2	Side light with	1	lamps each of	32	candle power requiring a total current of	above Amperes
3	Cargo lights	(2 of 6 7 of 2) 16			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 Wheelhouse

## DESCRIPTION OF CABLES.

Main cable carrying 63 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, 16 square inches total sectional area  
 Branch cables carrying 9 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, 003 square inches total sectional area  
 Branch cables carrying 33 Amperes, comprised of 7 wires, each 12 S.W.G. diameter, 0125 square inches total sectional area  
 Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 12 S.W.G. diameter, 0012 square inches total sectional area  
 Cargo light cables carrying 5 Amperes, comprised of 130 wires, each 40 S.W.G. diameter, 002 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Henley's V.P.R. lead covered & lead covered & armoured

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 Through beams clipped to under side of decks & bulkheads with strong galvanized clips.



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *no*

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 *" " "*

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 *Lead bushes where not armoured* through bulkheads, &c. *Brass W.I. glands* ✓

How are cables carried through decks *galvanized W.I. 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 *yes*

If so, how are they protected *Lead covered & armoured*

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

If so, how are the lamp fittings and cable terminals specially protected *Strong C.I. fittings with heavy bullheads & strong guards*

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

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 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 *10* 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 *28/9/14*

COMPASSES.

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

Distance between dynamo or electric motors and steering compass *" "*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
2	Lead to	15	

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 *any* course in the case of the standard compass and *nil* degrees on *any* course in the case of the steering compass.

FOR COCHRANE & SONS, LTD.

J. W. Cochrane.

Builder's Signature.

Date *14/10/14*

GENERAL REMARKS.

DIRECTOR.

*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.*

*J.W.D. 9/10/17.*

*Frank L. Stanger.*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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