

MON. 16 OCT. 1916

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29553

Port of Hull Date of First Survey 5-9-16 Date of Last Survey 14-9-16 No. of Visits 5  
 No. in on the Iron Steel new tanker H. Hubert Port belonging to Hull  
 Reg. Book 136 Built at Beverley By whom Cook When built 1916-9  
 Owners St Andrew's & Son Fishing Co Ltd Owners' Address  
 Yard No. 344 Electric Light Installation fitted by The Humber Electrical Eng Co When fitted 1916-9

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Robey's high pressure vertical engine open type coupled direct to Holmes & Co  
compound wound dynamo  
 Capacity of Dynamo 30 Amperes at 100 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 " near dynamo having switches to groups three of lights, &c., as below  
 Positions of distribution boxes 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 entrance 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

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 45 arranged in the following groups:—

A	<u>11</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>6.6</u>	Amperes
B	<u>13</u> <u>5</u>	lights each of	<u>16</u> <u>32</u>	candle power requiring a total current of	<u>13.8</u>	Amperes
C	<u>6</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>3.6</u>	Amperes
D	<u>10</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>6.0</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>included</u>	Amperes
<u>2</u>	Side light with <u>1</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>in above</u>	Amperes
	<u>1</u> Cargo lights of <u>6 - 16</u>			candle power, whether incandescent or arc lights	<u>incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. ✓

Where are the switches controlling the masthead and side lights placed Wheel house

## DESCRIPTION OF CABLES.

Main cable carrying	<u>30</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>7</u>	Amperes, comprised of	<u>3</u>	wires, each	<u>20</u>	S.W.G. diameter,	<u>.008</u>	square inches total sectional area
Branch cables carrying	<u>22</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>20</u>	S.W.G. diameter,	<u>.007</u>	square inches total sectional area
Leads to lamps carrying	<u>6</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>3.6</u>	Amperes, comprised of	<u>140</u>	wires, each	<u>38</u>	S.W.G. diameter,	<u>.002</u>	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

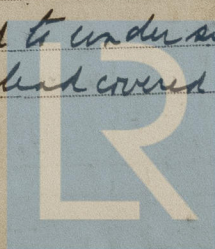
V. I. R. cables lead covered & lead covers & armoured.

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 deck  
to bulkheads with strong galvanized iron clips cables lead covered & armoured.



Lloyd's Register  
 W1347-0010  
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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 when not armoured through bulkheads, &c. Brass & I. Glands.*

How are cables carried through decks *through iron 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 in fish rooms*

If so, how are the lamp fittings and cable terminals specially protected *strong C.I. fittings fitted with bullseyes & strong*

Where are the main switches and fuses for these lights fitted *Wheel house* *Brass guards*

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 *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 NUMBER ELECTRICAL ENGINEERING CO.

*W.E. Stutter*

Electrical Engineers

Date

COMPASSES.

PROPRIETOR

Distance between dynamo or electric motors and standard compass

*about 45 ft*

Distance between dynamo or electric motors and steering compass

*" 45 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>2</i>	Amperes	<i>lead to</i>	<i>feet from</i> standard compass	<i>lead to</i>	<i>feet from</i> 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 *any* course in the case of the standard compass and *nil* degrees on *any* course in the case of the steering compass.

COOK, WELTON & GEMMELL, LTD.

*W. H. Hutton*

DIRECTOR.

Builder's Signature.

Date

*10<sup>th</sup> Oct 1916*

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 ELEC. LIGHT.*

*JWD 16/10/16.*

*Frank L. Sturgeon.*

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.