

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 70926

Port of Newcastle-on-Tyne Date of First Survey 13<sup>th</sup> Mar Date of Last Survey 30<sup>th</sup> Apr 18 No. of Visits 9  
 No. in Reg. Book on the Steel S.S. RONA Port belonging to Sydney  
 Built at MIDDLESBOROUGH By whom RAYLTON DIXON & Co. When built 1918  
 Owners The Colonial Sugar Refining Co. Owners' Address \_\_\_\_\_  
 Yard No. 609 Electric Light Installation fitted by J. H. HOLMES & Co. When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 6 3/4" x 5" Enclosed Forced Lubrication Engine Capable of giving 2400<sup>0</sup> 100 lbs steam pressure @ 550 R.P.M.  
 Capacity of Dynamo 150 Amperes at 100 Volts, whether continuous or alternating current Yes  
 Where is Dynamo fixed in Engine Room, starting platform Whether single or double wire system is used Double  
 Position of Main Switch Board near Dynamo having switches to groups A, B, C, D, E, F, G of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each 3 way 150 amp section 1 box in Porty, 1 box in Starboard, 1 box in Fore, 1 box in Aft.  
1 way 50 amp fuse box in Porty, 1 way 50 amp fuse box in Starboard, 1 way 50 amp fuse box in Fore, 1 way 50 amp fuse box in Aft.  
1 way 50 amp fuse box in Porty, 1 way 50 amp fuse box in Starboard, 1 way 50 amp fuse box in Fore, 1 way 50 amp fuse box in 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-oxidizable metal Yes and constructed to fuse at an excess of 100 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 18944 lamps arranged in the following groups:—  
 A \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes  
 B \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes  
 C \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ 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  
 1 Mast head light with 1 lamps each of 32 candle power requiring a total current of 1.12 Amperes } included above.  
 2 Side lights with 1 lamps each of 32 candle power requiring a total current of 2.24 Amperes } included above.  
 5 Cargo lights of 4 x 10 candle power, whether incandescent or arc lights Incandescent  
 If arc lights, what protection is provided against fire, sparks, &c. On hexagonal lanterns enclosed at lower end

Where are the switches controlling the masthead and side lights placed On Chart Room.

## DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of 27 wires, each 15 S.W.G. diameter, .15 square inches total sectional area  
 Branch cables carrying 25.5 Amperes, comprised of 7 wires, each 15 S.W.G. diameter, .028 square inches total sectional area  
 Branch cables carrying 8 Amperes, comprised of 7 wires, each 15 S.W.G. diameter, .028 square inches total sectional area  
 Leads to lamps carrying 20 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0015 square inches total sectional area  
 Cargo light cables carrying 2.24 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

All conductors are formed of A.C. conductors (Twined) insulated with pure para rubber & vulcanized rubber. Taped & braided over all.  
 Joints in cables, how made, insulated, and protected None existing in system.  
 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 None  
 Are there any joints in or branches from the cable leading from dynamo to main switch board None  
 How are the cables led through the ship, and how protected Lead covered, clipped up in accommodation, & secured & secured clipped up in machinery spaces, Tween Decks & Foreward.



**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible *Yes, except in lower Decks if fitted with lugs.*  
 What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead covered.*  
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Insured & Braided.*  
 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 *Bushed with Fibre.* through bulkheads, &c. *Stuffing glands*  
 How are cables carried through decks *Lead & iron tubes flanged and made watertight*  
 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 *Clipped up to underside of Decks*  
 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 *Alloy C.S. fittings with C.S. covers.*  
 Where are the main switches and fuses for these lights fitted *in engine room.*  
 If in the spaces, how are they specially protected *None*  
 Are any switches or fuses fitted in bunkers *None*  
 Cargo light cables, whether portable or permanently fixed *portable.* How fixed *Socket connections.*  
 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, 2*, and with an amperemeter *Yes, 2*, fixed *on main boards.*

**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.

*J.H. Thomas* Electrical Engineers Date *27/4/18*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *Approximately 216 feet*  
 Distance between dynamo or electric motors and steering compass *" " " 208 "*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>28</i>	Ampere	<i>inside</i>	feet from standard compass	<i>inside</i>	feet from steering compass
A cable carrying	<i>4.48</i>	Ampere	<i>approx 12</i>	feet from standard compass	<i>approx 16</i>	feet from steering compass
A cable carrying	<i>25.5</i>	Ampere	<i>" 24</i>	feet from standard compass	<i>" 20</i>	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 *0* degrees on *all* courses in the case of the standard compass and *0* degrees on *all* courses in the case of the steering compass.

*J.M. Hanway* Director Builder's Signature. Date *29<sup>th</sup> May 1918*

**GENERAL REMARKS.**

*The above installation is also fitted with 5-15 amp radiators, & an electrically controlled whistle from the upper and lower bridges.*

*The above installation has been fitted in a satisfactory manner & in accordance with the Rules this vessel is eligible for THE RECORD Elec. light.* *J.W.D. 31/5/18.*  
*Thomas Field*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.





003534-003540-0247  
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30 APR 1919

lights in the following groups:-

{	4 LIGHTS EACH OF 32 CANDLE POWER REQUIRING APPROX 25.5 Amps			
	<del>4 40 Watt Lamps</del>			
	44 (20 WATT) LIGHTS EACH OF 16 C.P.	"	"	25.5 Amps.
	10 " " " 16 C.P.	"	"	25.5 "
	8 " " " 8 C.P.	"	"	25.5 "

{	4 " " " 16 C.P.	"	"	12.5 "
	50 (20 WATT) " " " 16 C.P.	"	"	12.5 "
	40 (20 " ) " " " 16 C.P.	"	"	8.0 "

maxon mains only 1.5 K.W. " " 20 "

4 - 40c Lamps EACH OF 7camps " " 28.0 "

25 (20 WATT) LIGHTS " " 16 C.P. " " 25.0 "

2 - 15 Amp Radiators Requiring approx 30 Amps

3 - 10 " " " " " " 20 "

Branch cables carrying 0 Amperes, comprised of 7 wires, each 10 S.W.G. diameter, 0.20 square

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