

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6380.

Port of Belcast Date of First Survey June 28 Date of Last Survey Oct. 19 No. of Visits 13
 No. on the 100 Part belonging to Belcast
 Reg. Book 100 Built Belcast By whom Haulant & Wolff When built 1907
 Owners Anglo-American Oil Co. Ltd. Owners' Address London
 Yard No. 3850 Electric Light Installation fitted by W. H. Allen & Son Ltd. When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

40 2 pole semi-enclosed compound-wound dynamos direct coupled to Curtis steam Turbines

Capacity of Dynamo 200 Amperes at 125 Volts, whether continuous or alternating current continuous.

Where is Dynamo fixed in recess at aft end of stowage engine Room Main Deck level

Position of Main Switch Board on bulkhead near dynamo having switches to groups A, B, C, D, E, F, G, H of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each -

If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 100 per cent over the normal current

Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 371 arranged in the following groups :-

A	33	lights each of	16	candle power requiring a total current of	14.85	Amperes
B	9	lights each of	16	" " " " " " " "	4.05	Amperes
C	45	" " " " " " " "	16	" " " " " " " "	20.25	"
D	54	lights each of	16	candle power requiring a total current of	24.30	Amperes
E	16	" " " " " " " "	16	" " " " " " " "	7.20	"
F	31	lights each of	16	candle power requiring a total current of	15.95	Amperes
G	27	" " " " " " " "	16	" " " " " " " "	12.15	"
H	90	lights each of	16	candle power requiring a total current of	40.50	Amperes
4	Mast head light with	1 lamp each of	32	candle power requiring a total current of	1.8	Amperes
2	Side light with	1 lamp each of	32	candle power requiring a total current of	.9	Amperes
10	Cargo lights	each of 6	16	candle power, whether incandescent or are 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 in wheel house on bridge.

DESCRIPTION OF CABLES.

Main cable carrying	200	Amperes, comprised of	61	wires, each	16	L.S.G. diameter,	.20	square inches total sectional area
Branch	21	" " " " " " " "	19	" " " " " " " "	16	" " " " " " " "	.0914	" " " " " " " "
Branch cables carrying	240	Amperes, comprised of	19	wires, each	16	L.S.G. diameter,	.0624	square inches total sectional area
Branch cables carrying	24	" " " " " " " "	7	" " " " " " " "	16	" " " " " " " "	.0351	" " " " " " " "
Leads to lamps carrying	2.7	Amperes, comprised of	7	" " " " " " " "	20	L.S.G. diameter,	.0179	square inches total sectional area
Cargo light cables carrying	2.7	Amperes, comprised of	248	wires, each	38	L.S.G. diameter,	.0031	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

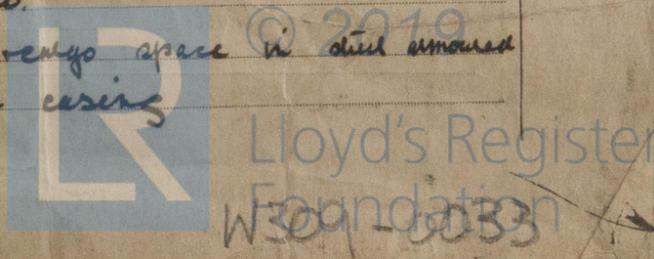
The conductor is tinned, covered with one layer pure Para rubber then two layers of vulcanizing rubber, the whole vulcanized together and finally taped and braided.

Joints in cables, how made, insulated, and protected Thoroughly soldered insulated with two layers pure Para rubber, two layers prepared tape then varnished.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 yes

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 summer tanks ready space in shell enclosed insulated conduit, through living rooms in strong wood casing



This document is required not to be used as evidence in any court of law.

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? **steel conduit.**

What special protection has been provided for the cables near galleys or oil-lamps or other sources of heat? **none near furnace heat**

What special protection has been provided for the cables near boiler casings? **cables led in insulated steel conduit.**

How are cables carried through beams? **in fibre funnels** through bulkheads, &c. **in fibre funnels.**

How are cables carried through decks? **through glands.**

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? **in insulated steel conduit.**

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? **N.T. globes with brass guards.**

Where are the main switches and cut outs for these lights fitted? **on main switchboard.**

If in the spaces, how are they specially protected? **—**

Are any switches or cut outs 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? **Double wired**

How are the returns from the lamps connected to the hull? **Double wired**

Are all the joints with the hull in accessible positions? **—**

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas? **yes**

Are any switches, cut outs, 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? **vapour proof globes with guard**

The installation is supplied with a voltmeter and **three** amperemeter, fixed **a Switchboard.**

The copper used is guaranteed to have a conductivity of **100** per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than **2500.** megohms per statute mile after 24 hours' immersion in seawater.

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.

For **W. Hallen Son & Co Ltd**
J. W. Parrinson Electrical Engineers Date **24. 10. 07.**

COMPASSES.

Distance between dynamo or electric motors and standard compass? **260 feet**

Distance between dynamo or electric motors and steering compass? **260 feet.**

The nearest cables to the compasses are as follows:—
A cable carrying **20** Amperes **23** feet from standard compass **20** feet from 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.

For **Harland & Wolff Ltd**
J. W. Parrinson Builder's Signature. Date **30th Oct 1907**

GENERAL REMARKS. **This installation is of good description and has been fitted in accordance with the Rules.**

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

Committee's Minute

It is submitted that the Record of this vessel's electrical installation be noted in the Reg. Book.



WRITE ACROSS THIS MARGIN. THE SURVEYORS ARE REQUESTED TO WRITE ACROSS THIS MARGIN.

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REPORT FORM NO. 13.

Rpt. 9 Re Date No. in Reg. Bo 322 Tonnage Register Horse Power No. of D Steam Engines in Main