

WED 25 SEP 1918

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 645

Port of Vancouver, B.C. Date of First Survey 21 March Date of Last Survey July 5 1918 No. of Visits 9
 No. in 1 on the Iron or Steel Steamer "War Kootka" Port belonging to London
 Reg. Book entry Built at Vancouver, B.C. By whom Western Canada Shipyards When built 1918
 Owners Messrs Fernie & Co Owners' Address Liverpool
 Card No. 1 Electric Light Installation fitted by W. Fraser When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

15 K. W. General Electric Co. compound wound dynamo
coupled to be Laval Turb.

Capacity of Dynamo 90 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room Whether single or double wire system is used double

Position of Main Switch Board Engine Room near having switches to groups Six in all of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Wheel House (7) Midships (7)
Midship (for cargo) (8) Officers Quarters (4) Engine Room
(7) Fore (3)

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 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 arranged in the following groups:—

A	40	lights each of	16	candle power requiring a total current of	19.28	Amperes
B	42	lights each of	16	candle power requiring a total current of	20.24	Amperes
C	41	lights each of	16	candle power requiring a total current of	19.75	Amperes
D	62	lights each of	16	candle power requiring a total current of	29.76	Amperes
E	16	lights each of	16	candle power requiring a total current of	7.6	Amperes
F	9	lights each of	16	candle power requiring a total current of	3.6	Amperes
1	Mast head light with	1	lamps each of	16	candle power requiring a total current of	0.48
2	Side light with	1	lamps each of	16	candle power requiring a total current of	.96
13	Cargo lights of	4	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 Wheel House

DESCRIPTION OF CABLES.

Main cable carrying	<u>X90</u> Amperes, comprised of	<u>37</u> wires, each	<u>15</u> S.W.G. diameter,	<u>.19</u> square inches total sectional area
Branch cables carrying	<u>38</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>20</u> Amperes, comprised of	<u>7</u> wires, each	<u>18</u> S.W.G. diameter,	<u>.0125</u> square inches total sectional area
Leads to lamps carrying	<u>4</u> Amperes, comprised of	<u>1</u> wires, each	<u>16</u> S.W.G. diameter,	<u>.005</u> square inches total sectional area
Cargo light cables carrying	<u>4</u> Amperes, comprised of	<u>7</u> wires, each	<u>20</u> S.W.G. diameter,	<u>.007</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

30 70 pure para Rubber, tape and
braiding with water-proof compound.

Joints in cables, how made, insulated, and protected Splined, soldered, taped with pure rubber, and friction tape.

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 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 In watertight galvanized iron
conduit except in living Quarters, which are in wood moulding.

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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible yes except in cargo space when holds are full of cargo.
 What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture all wires in such places are in galvanized iron conduit.
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Iron Conduit.
 What special protection has been provided for the cables near boiler casings Iron Conduit.
 What special protection has been provided for the cables in engine room Iron Conduit.
 How are cables carried through beams Iron Conduit. through bulkheads, &c. Watertight glands.
 How are cables carried through decks Watertight 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 iron conduit (no wires terminate in cargo spaces.)
 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 from watertight fitting on deck.
 In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel Double wire
 How are the returns from the lamps connected to the hull none
 Are all the joints with the hull in accessible positions none
 Is the installation supplied with a voltmeter yes, and with an amperemeter yes, fixed 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 150 feet +
 How are the lamps specially protected in places liable to the accumulation of vapour or gas 150 feet +

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 _____ 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.

W.W. Fraser

Electrical Engineers

Date July 15-1918.

COMPASSES.

Distance between dynamo or electric motor's and standard compass

Distance between dynamo or electric motor's and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying	<u>20</u>	Amperes	<u>20</u>	feet from standard compass	<u>25</u>	feet from steering compass
A cable carrying	<u>15</u>	Amperes	<u>12</u>	feet from standard compass	<u>17</u>	feet from steering compass
A cable carrying	<u>0.4</u>	Amperes	<u>fitted in pedestal.</u>	feet from standard compass		feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

The maximum deviation due to electric currents, etc., was found to be _____ degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

W.W. Fraser.

Builder's Signature.

Date July 15-1918.

GENERAL REMARKS.

The Electric Light Installation of good quality and workmanship, tested under working conditions and found satisfactory.
Eligible in my opinion to be noted Electric Light in Register Book 7-18.
James Murdoch.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 4-OCT. 1918

TUE. 10 DEC. 1918

TUE. 25 MAR. 1919

FRI. 28 MAR. 1919

It is submitted that this vessel is eligible for the LLOYD'S REG. ELEC. LIGHT

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.