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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 863

Port of Vancouver B.C. Date of First Survey 6th Jan 1921 Date of Last Survey 2nd April 1921 No. of Visits 8

No. in Reg. Book ____ on the ~~Iron~~ or Steel S.S. CANADIAN SKIRMISHER" Port belonging to Montreal

Built at Vancouver By whom Wallace Bros DD 6Z 2a When built 1921

Owners Canadian Government Owners' Address Ottawa Canada

Yard No. 104 Electric Light Installation fitted by Wallace Bros DD 6Z 2a When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1-15 KW Continuous current compound 110-120 Volt, Compton Dynamo direct coupled to a 6½ × 6 Vertical single Drysdale Engine.

Capacity of Dynamo 136 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 Starboard having switches to groups A.B.C.D.E.F.G.H.I of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each A Chart house 10 circuits) (B Winches 1½ KW motor) (C Crews quarters in Poop 10 circuits) (D Engine Room casing 10 circuits) (E After holds 11 circuits) (F Forward accomodation 10 circuits Hands + 10 Port) (G Engine Quarters 10 circuits) (H. Officers accomodation on Bridge 10 circuits P + 10 S) (I Fidley 10 circuits)

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 10 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 120 arranged in the following groups :—

A	16	lights each of	16/32	candle power requiring a total current of	6	Amperes
F					8	
B	motor + wireless	lights each of	1½ KW 32	candle power requiring a total current of	14	Amperes
G					6	
C	33	lights each of	32	candle power requiring a total current of	12·4	Amperes
H			32		22	
D	42	lights each of	32	candle power requiring a total current of	10·2	Amperes
I			32		9·5	
E	14	lights each of	32	candle power requiring a total current of	4	Amperes
1	Mast head light with	2	lamps each of	32	candle power requiring a total current of	30	Amperes
					2	
2	Side light with	2	lamps each of	32	candle power requiring a total current of	2	Amperes
5	Cargo lights of	192	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 Chart house

DESCRIPTION OF CABLES.

Main cable carrying 92 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, ·09760 square inches total sectional area

Branch cables carrying 38 Amperes, comprised of 7 wires, each 17 S.W.G. diameter, ·01758 square inches total sectional area

Branch cables carrying 28 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, ·01292 square inches total sectional area

Leads to lamps carrying 24 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, ·00727 square inches total sectional area

Cargo light cables carrying 6 Amperes, comprised of 7 wires, each 10 S.W.G. diameter, ·00327 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables are rubber insulated + lead sheated and armoured with steel wire

Joints in cables, how made, insulated, and protected no cables spliced, any joints that are made are in watertight junction boxes.

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 armoured cable.

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 to weather or moisture lead sheathed and steel armoured with water tight fittings

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat armoured cable

What special protection has been provided for the cables near boiler casings armoured cable

What special protection has been provided for the cables in engine room armoured cable

How are cables carried through beams Lead bushings *through bulkheads, &c.* glands

How are cables carried through decks auto tubes

Are any cables run through coal bunkers no *or cargo spaces* yes *or spaces which may be used for carrying cargo, stores, or baggage* yes

If so, how are they protected armoured cables

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 cargo space fittings

Where are the main switches and fuses for these lights fitted main switch board

If in the spaces, how are they specially protected armoured cable

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable *How fixed* plug box on deck

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 on switch board*

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 2500 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.

Wallace Shipbuilding & Dry Dock Co. Ltd.

Wallace *Electrical Engineers* Date 14th April 1921

COMPASSES.

Distance between dynamo or electric motors and standard compass 30 feet and 150 feet

Distance between dynamo or electric motors and steering compass 35 feet and 155 feet

The nearest cables to the compasses are as follows :—

A cable carrying	10	*Amperes*	13	*feet from standard compass*	15	*feet from steering compass*
A cable carrying	28·5	*Amperes*	38	*feet from standard compass*	38	*feet from steering compass*
A cable carrying	18	*Amperes*	38	*feet from standard compass*	38	*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 no *degrees on* any *course in the case of the standard compass and* no *degrees on* any *course in the case of the steering compass.*

Wallace Shipbuilding & Dry Dock Co. Ltd.

Wallace *Builder's Signature.* Date 14th April 1921

GENERAL REMARKS. The Electric Light Instalation is of good quality, tested under working conditions and found satisfactory. Eligible in my opinion to be noted Electric Light in Register Book

It is recommended that this vessel is eligible for LIGHT. Elec Light Cell 18/5/21

Evan Edwards.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 20 MAY 1921

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN

1m.7.10.—Transfer.