

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8495

Port of Dundee Date of First Survey 24-7-1924 Date of Last Survey 14-9-1924 No. of Visits 8
 No. in Reg. Book on the Iron or Steel Paddle Steamer "William High" Port belonging to Dundee
 Built at Caledon Shipyard By whom The Caledon S. & E. Co. Ltd. When built Sept. 1924
 Owners The Dundee Harbour Trustees Owners' Address Dundee.
 Yard No. 292 Electric Light Installation fitted by The Caledon S. & E. Co. Ltd. When fitted Sept. 1924

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Vertical Single Cylinder 6" x 5" Stroke coupled to a Multipolar Compound Wound Dynamo
 110 Volts 7 K.W. 400 R.P.M.

Capacity of Dynamo 64 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Starbd. Side of Engine Room. Whether single or double wire system is used Double
 Position of Main Switch Board Engine Casing Aft having switches to groups 5 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each nil

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 --- 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-oxidisable 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 73 arranged in the following groups:—

Group	No. of lights	Wattage per light	Candle power	Total current (Amperes)
A	12	6 - 100 W.	6	6 Amperes
B	19	lights each of 40 W.	4.4	4.4 Amperes
C	21	lights each of 40 W.	9	9 Amperes
D	12	lights each of 40 W.	4.5	4.5 Amperes
E	9	lights each of 40 W.	3.0	3.0 Amperes
2	Mast head light with 1 lamp each of 100 W.	2	2 Amperes	
4	Side light with 1 lamp each of 100 W.	4	4 Amperes	
3	Cargo lights of 4 Lights each 60 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 On Bridge

DESCRIPTION OF CABLES.

Description	Amperes	Wires	Wires per cable	S.W.G. diameter	Square inches total sectional area
Main cable carrying	35	7	14	.1000	square inches total sectional area
Branch cables carrying	9	7	20	.0070	square inches total sectional area
Branch cables carrying	4	3	20	.0070	square inches total sectional area
Leads to lamps carrying	4	3	22	.0045	square inches total sectional area
Cargo light cables carrying	2	7	20	.0045	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All Wiring Lead Covered Vulcanized India Rubber Cable.

Joints in cables, how made, insulated, and protected No Joints.

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 None

How are the cables led through the ship, and how protected Bored through Beams & fixed with Brass Saddles.



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007456-007464-0140

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 Protected by Galvanized Tube.

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

What special protection has been provided for the cables near boiler casings Lead Covered

What special protection has been provided for the cables in engine room Run on Perforated Tray Lead Covered

How are cables carried through beams Lead Bushes through bulkheads, &c. Watertight Glends ✓

How are cables carried through decks Deck Pipes ✓

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

If so, how are they protected _____

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage _____

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 None

Cargo light cables, whether portable or permanently fixed Permanent How fixed Galvanized Tube

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 amperometer Yes, fixed on 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 _____ 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. M. Gillanders

Electrical Engineers

Date 22nd September '24

COMPASSES.

Distance between dynamo or electric motors and standard compass 90ft. approx.

Distance between dynamo or electric motors and steering compass 40ft. approx.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>1</u>	Amperes	<u>1</u>	feet from standard compass	<u>1</u>	feet from steering compass
A cable carrying	<u>1</u>	Amperes	<u>1</u>	feet from standard compass	<u>1</u>	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 THE CALEDON SHIPBUILDING & ENGINEERING CO. LD

Builder's Signature.

Date 22nd September 1924

GENERAL REMARKS.

This installation has been fitted on board in a satisfactory manner, and in accordance with the Rules. The materials and workmanship are sound and good; on completion it was tried under working condition and found efficient in all respects.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light.

Fee £ 7-0-0.

J. W. D. 25/9/24

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 26 SEP 1924



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