

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1436 b.

Port of Christiania Date of First Survey 7-1-15 Date of Last Survey 15-2-15 No. of Visits 5
 No. in Reg. Book on the ~~Iron or Steel~~ Steel Scania Skard Port belonging to Christiania
 Built at Fredrikstad By whom Fr. stat. mek. Verket When built 1915
 Owners a/s Skule, Mønst. B. A. Sæm Owners' Address Christiania
 Yard No. 181 Electric Light Installation fitted by Oslands Elektrisk Aktieselskab When fitted 1915

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Replaced by 110V. 91 AMP. (10KW) mt. Allen steam engine
Compound dynamo direct coupled with steam engine

Capacity of Dynamo 91 amp 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 — having switches to groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each in stairs to navigation room with 3 fuses and 2 switches

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 —

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 60 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 —

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

Total number of lights provided for 82 arranged in the following groups:—

A	3. melalium	lights each of	16	candle power requiring a total current of	12	Amperes
B	6	lights each of	16	candle power requiring a total current of	0.9	Amperes
C	11	lights each of	16	candle power requiring a total current of	1.75	Amperes
D	8	lights each of	16	candle power requiring a total current of	1.3	Amperes
E	45	lights each of	16	candle power requiring a total current of	7.5	Amperes
	2. Mast head light with 2 lamps each of	25	candle power requiring a total current of	0.5	Amperes	
	2. Side light with 2 lamps each of	25	candle power requiring a total current of	0.75	Amperes	
	2. Cargo lights of	25	candle power, whether incandescent or arc lights	0.5 melal		

If arc lights, what protection is provided against fire, sparks, &c. no arc lights

Where are the switches controlling the masthead and side lights placed in stairs to navigation room

DESCRIPTION OF CABLES.

Main cable carrying 40 Amperes, comprised of 8 wires, each 3.60 L.S.G. diameter, 0.114 square inches total sectional area
 Branch cables carrying 20 Amperes, comprised of 2x6 wires, each 2.80 L.S.G. diameter, 0.030 square inches total sectional area
 Branch cables carrying 6 Amperes, comprised of 2x15 wires, each 1.40 L.S.G. diameter, 0.0099 square inches total sectional area
 Leads to lamps carrying 6 Amperes, comprised of 2x15 wires, each 1.40 L.S.G. diameter, 4 square inches total sectional area
 Cargo light cables carrying 12 Amperes, comprised of 2x15 wires, each 1.40 L.S.G. diameter, 4 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Through cargo spaces and engine room lead armoured steel cables, in saloon and cabin lead armoured cables

Joints in cables, how made, insulated, and protected in boxes insulated with gum and chaffron compound

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 lead armoured steel cables

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 steel pipes

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

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

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

How are cables carried through beams in steel pipes through bulkheads, &c. steel pipes

How are cables carried through decks —

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 steel armoured cables in wood case

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 steel armoured and steel pipes

Where are the main switches and cut outs for these lights fitted Engine Room

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 ✓ How fixed ✓

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 ✓

The installation is — supplied with a voltmeter and — an amperemeter, fixed on the main switch board

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 —

Are any switches, cut outs, 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 98. per cent. that of pure copper.

Insulation of cables is guaranteed (to have a resistance of not less than) 2000 Volt between copper and sheath 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.

Østlandsk Elektrisk Aktieselskap

Anders Bugn

Electrical Engineers

Date 5-3-1915

COMPASSES.

Distance between dynamo or electric motors and standard compass Dynamo in Engine Room

Distance between dynamo or electric motors and steering compass —

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>

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 practically nil degrees on different course in the case of the standard compass and practically nil degrees on different course in the case of the steering compass.

pe. 1/5 Fredrikstad msk. Vechsted

Builder's Signature.

Date 6.3.15.

GENERAL REMARKS.

The installation have been tested under full power and found to work satisfactory.

It is submitted that this vessel is eligible for

THE RECORD. Elec. light.

JWR

15/4/15.

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

Committee's Minute