

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 131

Port of Helsingfors Date of First Survey 19th July Date of Last Survey 22nd October 1921 No. of Visits 6
 No. in Reg. Book 39244 on the ~~Iron or Steel~~ St. Sr. "Suomen Poika" Port belonging to Helsingfors
 Built at Helsingfors By whom A. B. Sandvikens Skrypsodolen When built 1921
 Owners Suomen Vallamerentakainen K. O. Y. Owners' Address Helsingfors
 Yard No. 231 Electric Light Installation fitted by A. B. Gottfr. Strömberg O. Y. When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

direct current dynamo coupled to steam turbine

Capacity of Dynamo 90 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed in the engine room Whether single or double wire system is used double wire system
 Position of Main Switch Board engine room having switches to groups 7 groups of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each switches one (A) of 5 groups (in accommodation aft) one (B) of 12 groups (in accommodation midship) one (C) of 2 groups (in chart room) one (D) of 1 group in engine room one (E) of signal lighting, one (F) search light mirror one (G) of radio telegraph
 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 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 95 arranged in the following groups:—

Group	Description	Number of Lights	Candle Power	Current (Amperes)
A	lights each of 25	16	25	4
B	lights each of 25-32	49	25-32	15
C	lights each of 25	14	25	4
D	lights each of 25	9	25	1
E	lights each of --	--	--	--
2	Mast head light with 1 lamps each of 32	1	32	2
2	Side light with 1 lamps each of 32	1	32	2
3	Cargo lights of 25	3	25	2

candle power, whether incandescent or arc lights incandessent

If arc lights, what protection is provided against fire, sparks, &c. arc lights not used.
 Where are the switches controlling the masthead and side lights placed in steering cabin

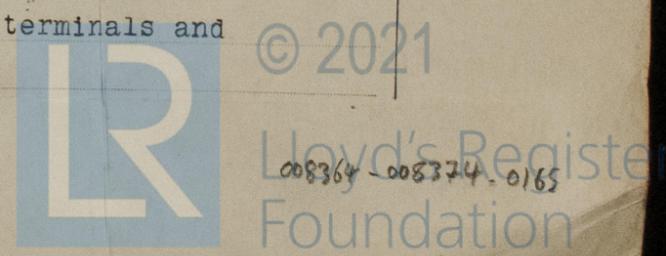
DESCRIPTION OF CABLES.

Main cable carrying	Amperes	Comprised of	Wires	Diameter (S.W.G.)	Length	Sectional Area
90	37	37	1.5	60	60	square inches
15	7	7	0.86	4	4	square inches
7	1	1	1.783	2.5	2.5	square inches
45	7	7	1.71	16	16	square inches
1	1	1	1.128	1	1	square inches

DESCRIPTION OF INSULATION, PROTECTION, ETC.

The cables are insulated by vulcanized rubber, lead armoured and protected by steel tubes where required.
 Joints in cables, how made, insulated, and protected the joints are soldered, insulated with india rubber and insulating tape and protected by air distributing boxes of brass.
 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 lead covered cable attached with terminals and serews, protected by gas tubes.

L.Y.
28/11/21.



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 the cables are lead covered and where necessary protected by iron pipes or wood casings.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat hot places avoided.

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

What special protection has been provided for the cables in engine room as above

How are cables carried through beams in lead bushes through bulkheads, &c. in watertight brass boxes

How are cables carried through decks in gas tubes with watertight glands

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 lead cables carried in gas tubes.

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

If so, how are the lamp fittings and cable terminals specially protected air tight switches and fittings with protective iron gratings.

Where are the main switches and fuses for these lights fitted on switch board in engine room.

If in the spaces, how are they specially protected air tight fuses.

Are any switches or fuses fitted in bunkers no.

Cargo light cables, whether portable or permanently fixed permanently How fixed by terminals fixed with metal screws.

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 ammeter 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 2000 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.

Aktiebolaget GÖTTFR. STRÖMBERG Osakeyhtiö. Electrical Engineers Date 13th October 1921

COMPASSES.

Distance between dynamo or electric motors and standard compass 5,25 metres from converter for wireless

Distance between dynamo or electric motors and steering compass 4,01 metres " " " "

The nearest cables to the compasses are as follows:—

A cable carrying	45	Amperes	4,75	feet from standard compass	3,75	feet from steering compass
A cable carrying	10	Amperes	4,5	feet from standard compass	1,5	feet from steering compass
A cable carrying	5	Amperes	1,1	feet from standard compass	1,1	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.

Aktiebolaget Sandvikens & Leppstöckens och mekaniska verkstad. Builder's Signature. Date Nov. 2 - 1921

GENERAL REMARKS.

X
This electric lighting installation has been fitted on board under our inspection and has been tested and found satisfactory. *this vessel is eligible for the RECORD. Etc. Light. 2.4 31/12/21.*

All the Rule requirements have been complied with.

FEE: *Göteborg 60% kr. 123,12. Applied for 9th Novemb. 1921*
Helsingfors 40% £ 4-16-0 Received 14th November 1921

W. Dulow *Olavin Tuomi*
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. DEC. 13 1921 TUE. 31 JAN 1922

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



2. 11. 20. - Trans. of.