

TUE. 22 NOV. 1921

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. St. "Suomen Poika" Port belonging to Helsingfors
 Built at Helsingfors By whom A. B. Sandvikens Skroppsbruk When built 1921
 Owners Suomen Valtamerenkantainen 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 continuousWhere is Dynamo fixed in the engine room Whether single or double wire system is used double wire systemPosition of Main Switch Board engine room having switches to groups 7 groups of lights, &c., as belowPositions 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 telegraphIf 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 currentAre 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 yesAre all switches and fuses constructed of incombustible materials and fitted on incombustible bases yesTotal number of lights provided for 95 arranged in the following groups:—

A	16	lights each of	25	candle power requiring a total current of	4	Amperes
B	49	lights each of	25-32	candle power requiring a total current of	15	Amperes
C	14	lights each of	25	candle power requiring a total current of	4	Amperes
D	9	lights each of	25	candle power requiring a total current of	1	Amperes
E	--	lights each of	--	candle power requiring a total current of	--	Amperes
2	Mast head light with 1 lamps each of	32	candle power requiring a total current of	2	Amperes	
2	Side light with 1 lamps each of	32	candle power requiring a total current of	2	Amperes	
3	Cargo lights of	25	candle power, whether incandescent or arc lights	incandescent		

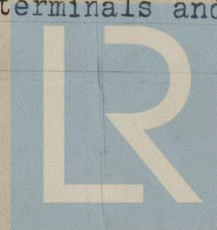
If arc lights, what protection is provided against fire, sparks, &c. arc lights not used.Where are the switches controlling the masthead and side lights placed in steering cabin

DESCRIPTION OF CABLES.

Main cable carrying	90	Amperes, comprised of	37	wires, each	1.5	S.W.G. diameter,	60	mm.	square inches total sectional area
Branch cables carrying	15	Amperes, comprised of	7	wires, each	0.86	S.W.G. diameter,	4	mm	square inches total sectional area
Branch cables carrying	7	Amperes, comprised of	1	wires, each	1.783	S.W.G. diameter,	2.5	mm	square inches total sectional area
Leads to lamps carrying	45	Amperes, comprised of	7	wires, each	1.71	S.W.G. diameter,	16	mm	square inches total sectional area
Cargo light cables carrying	1	Amperes, comprised of	1	wires, each	1.128	S.W.G. diameter,	1	mm	square inches total sectional area

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 yesAre 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.

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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, & 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

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

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 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 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 COTTER, 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:—

Cable	Amperes	Feet from standard compass	Feet from steering compass
A cable carrying 45	Amperes 4.75	3.75	feet from steering compass
A cable carrying 10	Amperes 4.5	1.5	feet from steering compass
A cable carrying 5	Amperes 1.1	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 & Leppsaucka och mekaniska verkstad.

Builder's Signature.

Date Nov. 2 - 1921

GENERAL REMARKS.

This electric lighting installation has been fitted on board under our inspection and has been tested and found satisfactory.

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

V. Rulow *Optim. Tysk*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. DEC. 13 1921

TUE. 31 JAN 1922



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