

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3685.

Port of Göteborg Date of First Survey 23rd May Date of Last Survey 31st July 1917 No. of Visits 4
 No. in Reg. Book 132 on the Iron or Steel s/s Nasilia Port belonging to Göteborg
 Built at Ökarshamn By whom Ökarshamns Verkstads AB When built 1917
 Owners Pederiaklieb. Lovroka Lloyd Owners' Address Göteborg
 Yard No. 257 Electric Light Installation fitted by Suth & Rosens Elektr. AB When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Steam Engine System Telal Jönköpings Mek. Verkstad.
 Capacity of Dynamo 73 Amperes at 110-115 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
 Position of Main Switch Board engine room having switches to groups 4 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each one in way of crews 3 switches on in office 4 switches one in way of saloon 6 switches, and one in chart room 5 switches

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 yes

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 100 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 140 arranged in the following groups:—

A	16	lights each of	16	candle power requiring a total current of	3	Amperes	
B	19	lights each of	16	candle power requiring a total current of	4	Amperes	
C	31	lights each of	16	candle power requiring a total current of	6	Amperes	
D	5	lights each of	32	candle power requiring a total current of	3	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	11	Amperes
2	Side light with	1	lamps each of	32	candle power requiring a total current of	11	Amperes
8	Cargo lights of		125	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 in chart room

DESCRIPTION OF CABLES.

Main cable carrying 85 Amperes, comprised of 19 wires, each S.W.G. diameter, 0600 square inches total sectional area
 Branch cables carrying 21 Amperes, comprised of 7 wires, each S.W.G. diameter, 0055 square inches total sectional area
 Branch cables carrying 28 Amperes, comprised of 7 wires, each S.W.G. diameter, 0086 square inches total sectional area
 Leads to lamps carrying 9.5 Amperes, comprised of 7 wires, each S.W.G. diameter, 0024 square inches total sectional area
 Cargo light cables carrying 21 Amperes, comprised of 7 wires, each S.W.G. diameter, 0055 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

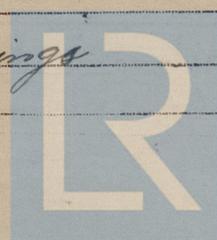
Cables are insulated by pure vulcanised rubber, lead armoured covered with paper & rubber tape. Protected by ironwire, and coated with red lead.

Joints in cables, how made, insulated, and protected watertight iron-bases.

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 steels tubes Iron-casings



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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 *Armouring as above protected by iron wire*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Armouring as above*

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

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

How are cables carried through beams *in iron pipes* through bulkheads, &c. *watertight glands ✓*

How are cables carried through decks *in iron pipes and watertight boxes ✓*

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 *Armouring as above*

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 *with iron cages*

Where are the main switches and fuses for these lights fitted *in engine room*

If in the spaces, how are they specially protected _____

Are any switches or fuses fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *portable* How fixed *terminals securely protected*

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 *Smith-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 *1000* megohms per ^{kilometre} ~~statute mile~~ at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than *5000* 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.

Luth & Rosens Elektriska AB, Stockholm Electrical Engineers Date *13th August 1917*

COMPASSES.

Distance between dynamo or electric motors and standard compass *Engine Room to flying bridge*

Distance between dynamo or electric motors and steering compass *Engine Room to flying bridge*

The nearest cables to the compasses are as follows:—

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 _____

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.

Aug. Carlsson / n.s. Eriksson Builder's Signature. Date _____

GENERAL REMARKS. *This electric lighting installation has been fitted onboard under my inspection and has been tested and found satisfactory. All rule requirements have been complied with.*

It is submitted that this vessel is eligible for THE RECORD. Elec. light. *JWD 14/9/17*

V. Bulow Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 14 SEP. 1917*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



105.1.16.—Transfer.