

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 236

Port of Bremen Date of First Survey 11. 2. 13 Date of Last Survey 15. 3. 13 No. of Visits 6
 No. in Reg. Book Sup 73 on the Iron or Steel S.G. Lauterfels Port belonging to Bremen
 Built at Bremen By whom Aktion-Gesellschaft Weser When built 1913
 Owners Deutsche Dampfschiff-Ges. Hansa Owners' Address Bremen
 Yard No. 192 Electric Light Installation fitted by Hans Siemens Schucker & Co. Hbg When fitted 1913

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One compound-wound dynamo type Siemens Schucker directly coupled to one compound steam engine

Capacity of Dynamo 122 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

Position of Main Switch Board in the engine room having switches to groups 4 for groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each one in the engine room with 6 switches, one in the steering machine room with 2 switches, one near the saloon with 10 switches, one foreship with 4 switches, 1 aft with 4 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 yes

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 100 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 yes, on fuse plugs

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes, on porcelain & marble

Total number of lights provided for 189 arranged in the following groups:—

A engine, boiler	89 lights each of	10	candle power requiring a total current of	45	Amperes
B foreship	19 lights each of	10	candle power requiring a total current of	8.5	Amperes
C midship	78 lights each of	10	candle power requiring a total current of	40	Amperes
D aft	3 lights each of	10	candle power requiring a total current of	1.5	Amperes
E	lights each of		candle power requiring a total current of		Amperes
2 Mast head light with	2 lamps each of	25	candle power requiring a total current of	4.6	Amperes
2 Side light with	2 lamps each of	32	candle power requiring a total current of	2.2	Amperes
2 Arc. lamps	lights of about	3000	candle power, whether incandescent or arc lights	arc light	

If arc lights, what protection is provided against fire, sparks, &c. glass globes, enclosed in wire with ashtrays

Where are the switches controlling the masthead and side lights placed in the chart-house

DESCRIPTION OF CABLES.

Main cable carrying	120 Amperes, comprised of	19 wires, each	2.52 L.S.G. diameter,	95 square inches	total sectional area
Branch cables carrying	40 Amperes, comprised of	19 wires, each	1.53 L.S.G. diameter,	35 square inches	total sectional area
Branch cables carrying	35 Amperes, comprised of	7 wires, each	2.13 L.S.G. diameter,	25 square inches	total sectional area
Leads to lamps carrying	0.5 Amperes, comprised of	1 wires, each	1.38 L.S.G. diameter,	1.5 square inches	total sectional area
Cargo light cables carrying	8 Amperes, comprised of	1 wires, each	2.20 L.S.G. diameter,	0 square inches	total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main and branch cables are insulated by vulcanized rubber lead sheathed and iron armed (double steel)

Joints in cables, how made, insulated, and protected in watertight boxes.

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 cables partly are laid in channels of iron, partly fastened with screwed clips. All cables are rubber insulated, lead covered, and steel armed. (Cable channels filled up with bitumastic).

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 cables are laid in U iron.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat they are armed by steel

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

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

How are cables carried through beams iron pipes through bulkheads, &c. stuffing boxes

How are cables carried through decks iron pipes partly brass stuffing boxes.

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

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 cut outs for these lights fitted

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 portable 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 500 Siemens Units 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.

HANSEATISCHE
SIEMENS-SCHUCKERT WERKE

Electrical Engineers W. J. J. J. Date May 14th 1913

COMPASSES.

Distance between dynamo or electric motors and standard compass 9,5 m

Distance between dynamo or electric motors and steering compass 8,5 m

The nearest cables to the compasses are as follows:—

A cable carrying	<u>4</u> Amperes	<u>3,0 m</u> feet from standard compass	<u>3,5 m</u> feet from steering compass
A cable carrying	<u>40</u> Amperes	<u>7,0 m</u> feet from standard compass	<u>5,5 m</u> feet from steering compass
A cable carrying	<u>2,5</u> Amperes	<u>7,5</u> feet from standard compass	<u>7,0 m</u> 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 no degrees on any course in the case of the standard compass and no degrees on any course in the case of the steering compass.

ACTION-GESELLSCHAFT „WESER“

Reuffel pp. Houverber Builder's Signature. Date 16th May 1913

GENERAL REMARKS.

This installation has been tried on a 12 hour trial trip and has been found to work well so that in my opinion the notation "Electric light" might be added to the vessel class in the Register Book.

It is submitted that this vessel is eligible for JWD G. H. G. Kamm

THE RECORD. Elec. light. 22/5713. Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

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