

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 14255

Port of Hamburg Date of First Survey 4<sup>th</sup> July Date of Last Survey 24<sup>th</sup> Oct. 14 No. of Visits 8  
 No. in 384 on the Iron or Steel S.S. "Irngard" Port belonging to Bremen  
 Built at Rostock By whom Akt. Ges. Neptun When built 1914  
 Owners Hamburg-Bremer Afrika Linien Owners' Address Bremen  
 No. 339 Electric Light Installation fitted by The Builders When fitted 1914

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound Steam Engine coupled direct to dynamo made by the  
Kofeld, Hardt & Armaturen-Fabrik running at 300 rev. per minute.  
 Capacity of Dynamo 190 Amperes at 110 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Engine Room Whether single or double wire system is used single  
 Position of Main Switch Board Engine Room having switches to groups P. C. & E. of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each 2 Steering Eng. space with 10 switches, 1 in Pastry  
with 6 switches, 1 under Forecastle with 2 switches, 1 in Chart-house with 6  
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 —  
 Are the fuses of non-oxidisable metal yes and constructed to fuse at an excess of 20 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 —  
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes  
 Total number of lights provided for 175 arranged in the following groups:—  
 A Eng. & H. Space 44 lights each of 16 candle power requiring a total current of 20 Amperes  
 B Off Midship Acc. 35 lights each of 16 candle power requiring a total current of 14 Amperes  
 C Off Midship Acc. 68 lights each of 16 candle power requiring a total current of 30.5 Amperes  
 D Forecastle 21 lights each of 16 candle power requiring a total current of 10 Amperes  
 E Chart-house 12 lights each of 4 off 32 - 8 off 16 candle power requiring a total current of 4 Amperes  
 F Mast head light with 1 lamps each of 32 candle power requiring a total current of 1.5 Amperes  
 G Side light with 1 lamps each of 32 candle power requiring a total current of 1.5 Amperes  
 H 5 Cargo lights of 1000 candle power, whether incandescent or arc lights 40

If arc lights, what protection is provided against fire, sparks, &c. —

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

## DESCRIPTION OF CABLES.

Main cable carrying 125 Amperes, comprised of 37 wires, each — S.W.G. diameter, 95 square inches total sectional area  
 Branch cables carrying 30 Amperes, comprised of 1 wires, each — S.W.G. diameter, 10 square inches total sectional area  
 Branch cables carrying 14 Amperes, comprised of 1 wires, each — S.W.G. diameter, 6 x 2.5 square inches total sectional area  
 Leads to lamps carrying 6 Amperes, comprised of 1 wires, each — S.W.G. diameter, 1.5 square inches total sectional area  
 Cargo light cables carrying 10 Amperes, comprised of 19 wires, each — S.W.G. diameter, 2.5 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main & Branch cables: Copper tinned, coated with Pure Rubber and impregnated jute tape, lead  
bound, spun with jute band, double iron bound and coated with asphalted jute tape.  
 Lamp leads: Copper tinned, coated with condolene and rubber, spun with tape insulation.  
 Joints in cables, how made, insulated, and protected Soldered and covered with condolene and tape for lamp cir-  
cuits and leads, metallic screw joints in watertight boxes on incombustible  
bases for main and branch cables.  
 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 Main & branch cables carried open, except where they are expo-  
sed to moisture, where they are led in iron pipes. Lamp leads are protected by wood, balm.



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 *iron bound lead covered cables, protected by iron pipes where exposed to moisture*

What special protection has been provided for the cables near galley or oil lamps or other sources of heat *iron bound cables*

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

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

How are cables carried through beams *wood and metal benders* through bulkheads *screwed into bulkheads*

How are cables carried through decks *iron galvanized stand pipes 10" high, filled with sand*

Are any cables run through coal bunkers *yes* or cargo spaces *yes* 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 be used for carrying cargo, stores, or baggage *yes*

If so, how are the lamp fittings and cable terminals specially protected *—*

Where are the main switches and fuses for these lights fitted *—*

If in the spaces, how are they specially protected *—*

Are any switches or fuses fitted in bunkers *yes*

Cargo light cables, whether portable or permanently fixed *possible* How fixed *—*

In vessels fitted on the single wire system, how is the dynamo connected to the hull of vessel *by brass screws*

How are the returns from the lamps connected to the hull *by brass screws*

Are all the joints with the hull in accessible positions *yes*

Is the installation supplied with a voltmeter *yes* and with an ammeter *yes*

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 vapour *yes*

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 *yes*

The copper used is guaranteed to have a conductivity of not less than that of the English standard and the wires are protected by tinning from the sulphur compounds of petroleum

Insulation of cables is guaranteed to have a resistance of not less than *100,000 ohms* after 24 hours' immersion in water the test being made after one minute's electrical leakage and while the cable is still immersed

The foregoing statements are a correct description of the Electric Light Installation and that it is at this date in good order and safe working condition.

*The Builders are the* *Electrician Engineer*

COMPASSES.

Distance between dynamo or electric motor and standard compass *65 ft.*

Distance between dynamo or electric motor and steering compass *65 ft.*

The nearest cables to the compasses are as follows

A cable carrying *145* *amps* *close to* *10 ft.* from standard compass

A cable carrying *—* *amps* *—* *10 ft.* from standard compass

A cable carrying *—* *amps* *—* *10 ft.* from standard compass

Have the compasses been adjusted with and without the electric installation *yes*

The maximum deviation due to electric currents *is* *not* *found* *in* *or* *perceptible*

*Electric Cable Co. Ltd.* *Schiffswerft & Maschinenfabrik*

GENERAL REMARKS.

*The Electric Light Installation is in accordance with the rules and eligible to be recorded "Electric Light" in the Register*

THE LLOYD'S REGISTER

TUES. 22 SEP 1925 TUES. 10 FEB 1925

FRI. 10 JAN 1924 Surveyor to Lloyd's Register of British and Foreign Shipping

Committee's Minute

TUES. 17 FEB 1925 FRI. 22 MAY 1925 TUES. 3 JAN 1925 TUL. 10 FEB 1925 TUES. 25 AUG 1925

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