

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9555*

Port of Hamburg Date of First Survey 10th Jan 07 Date of Last Survey 4th Apr 07 No. of Visits 8
 No. on the Iron or Steel S. S. "Schlesien" Port belonging to Bremen
 Reg. Book Built at Hamburg By whom Hamburg Schiffb.-G. When built 1907
 Owners Norddeutscher Lloyd Owners' Address Bremen
 Yard No. 270 Electric Light Installation fitted by Hamburg Schiffb.-G. When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound Steam Engine coupled direct to dynamo made by Norddeutscher Maschinen- & Ausrüstungs-Fabrik, Bremen, running at 300 rev. p. min.

Capacity of Dynamo 100 Amperes at 110 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine Room

Position of Main Switch Board Engine Room having switches to groups A, B, C & D of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1. Engine casing with 7 switches, 2. Boiler space with 6 switches, 3. Boiler casing with 6 switches, 4. Engine Room with 5 switches, 5. Pump with 7 switches, 6. Chartroom with 5 switches, 7. Forecastle w. 4 sw., 8. Deck w. 3 sw.

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 cessel 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

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 30 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

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 142 arranged in the following groups:—

- A Masthead 8 lights each of 16, 2 of 25, 2 of 35 candle power requiring a total current of 40 Amperes
- B Forward 30 lights each of 19 of 16, 1 of 25 candle power requiring a total current of 12.5 Amperes
- C Aft 30 lights each of 19 of 16, 1 of 25 candle power requiring a total current of 12.5 Amperes
- D Eng. & Mr. Gp. 34 lights each of 16 candle power requiring a total current of 20 Amperes
- E — lights each of — candle power requiring a total current of — Amperes

2 Mast head light with 1 lamps each of 25 candle power requiring a total current of 2 Amperes
2 Side light with 1 lamps each of 35 candle power requiring a total current of 3 Amperes

18 Cargo lights of 6 of 5x16-80, 12 of 16 candle power, whether incandescent or arc lights incl. in A, B, C.

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

Where are the switches controlling the masthead and side lights placed In Chartroom

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 2.5 L.S.G. diameter, 50 square inches total sectional area
 Branch cables carrying 40 Amperes, comprised of 7 wires, each 5 L.S.G. diameter, 35 square inches total sectional area
 Branch cables carrying 20 Amperes, comprised of 7 wires, each 2.5 L.S.G. diameter, 16 square inches total sectional area
 Leads to lamps carrying 18.6 Amperes, comprised of 1 wires, each 2.5 x 1.5 L.S.G. diameter, 2.5 x 1.5 square inches total sectional area
 Cargo light cables carrying 5.6 Amperes, comprised of 35 wires, each 1.07 L.S.G. diameter, 1.6 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main & Branch Cables: Copper twisted, covered with Para rubber, coated with impregnated jute tape, lead covered, again with impregnated jute, double iron band and jute space. Circuit & Lamp leads: Tinned copper wires coated with cambric and rubber.
 Joints in cables, how made, insulated, and protected Soldered and covered with cambric and tape for lamp circuits and leads. Metallic screw joints for Main and Branch cables, contained 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 Main & Branch cables carried open, except where they are exposed to heat, where they are carried in iron pipes. Circuit and lamp leads protected by wood batten.

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.*

Cables protected by Iron tubes where exposed to heat.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Iron bound cables.*

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

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

How are cables carried through beams *hardwood bushes* through bulkheads, &c. *covered brass bushes*

How are cables carried through decks *stagnelaminated claud pipes & high filled with non-conducting asphalt*

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

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 *yes, in Coal bunkers*

If so, how are the lamp fittings and cable terminals specially protected *by special, waterproof claudable fittings*

Where are the main switches and cut outs for these lights fitted *in Engine Rooms*

If in the spaces, how are they specially protected *Lamps protected by strong glass globe and gratings*

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 *Double wired throughout*

How are the returns from the lamps connected to the hull *—*

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

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 installation is *yes* supplied with a voltmeter and *yes* an amperemeter, fixed *Main Switch Board*

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 *50 Million Siemens units* megohms per *Kilometre* 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.

The Builders are the Electrical Engineers Date *—*

COMPASSES.

Distance between dynamo or electric motors and standard compass *abt. 110 ft.*

Distance between dynamo or electric motors and steering compass *— 100 —*

The nearest cables to the compasses are as follows:—

A cable carrying <i>.6</i> Amperes <i>close to</i> feet from standard compass <i>close to</i> feet from steering compass
A cable carrying <i>—</i> Amperes <i>—</i> feet from standard compass <i>—</i> feet from steering compass
A cable carrying <i>—</i> Amperes <i>—</i> feet from standard compass <i>—</i> 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 *nil* degrees on *—* course in the case of the standard compass and *nil* degrees on *—* course in the case of the steering compass.

Flensburger Schiffsbau-Gesellschaft.

Blum Builder's Signature. Date *4th March 1907*

GENERAL REMARKS. *The electric Light installation on board of this vessel is in my opinion fitted in conformity with the Society's Rules and eligible to be recorded "Elec. Light" in the Society's Register Book.*

Mr. Rose Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

It is submitted that the Record Elec. Light be noted in the Reg. Book.

L Lloyd's Register Foundation

14.3.07

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 12.