REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 10718.

rt of Hamburg Date of First Survey 5th Jany 09. Date of Last Survey 10th March 09. No. of Visits 10

. in Book on the ~~Iron or~~ Steel Sc. Sr "Buffalo" Port belonging to Hamburg

32 Built at Flensburg By whom Flensburger Schiffsbau Ges. When built 1909

ers Deutsch Amerika Petroleum Ges Owners' Address Hamburg

d No. 286 Electric Light Installation fitted by Builders When fitted 1909

CRIPTION OF DYNAMO, ENGINE, ETC.

2 sets of Compound Steam Engines, coupled direct to Siemens-Schuckert Dynamos running at 250 revolutions pr. min.

pacity of Dynamo 2 à 180 Amperes at 110 Volts, whether continuous or alternating current continuous

here is are Dynamo fixed Engine Room Whether single or double wire system is used double

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

positions of auxiliary switch boards and numbers of switches on each a.) Crew space with 4 switches, b.) Passage forewd. with 12 switches, c.) Passage aft with 8 switches, d.) Steering Engine space aft with 4 switches, e.) Sub-station from b.) in Chartthouse with 4 switches.

f 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

f 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

re the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 20 per cent over the normal current

re 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 —

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

Total number of lights provided for 286 arranged in the following groups :—

A Eng.r & Bkr. Space 41 lights each of 16 candle power requiring a total current of 25 Amperes

B Fore Ship 50 lights each of 16 candle power requiring a total current of 30 Amperes

C Midship. frd pt. 79 lights each of 75 of 16, 3 of 25, 1 of 32 candle power requiring a total current of 50 Amperes

D do aft pt. 74 lights each of 16 candle power requiring a total current of 45 Amperes

E After Ship 42 lights each of 16 candle power requiring a total current of 25 Amperes

2 Mast head light with 2 lamps each of 25 candle power requiring a total current of 2 Amperes
included in C.

2 Side light with 2 lamps each of 25 of 32 candle power requiring a total current of 2.5 Amperes
included in B., C., D., & E.

4 Cargo lights of each 6 x 16 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. No arc Lights fitted. 14 Handlamps (portable) with single lights of 16 candle power are included in A., B., C., D. & E.

Where are the switches controlling the masthead and side lights placed in Chartthouse

ESCRIPTION OF CABLES.

Main cable carrying 180 Amperes, comprised of 37 wires, each 3.25 m/m area L.S.G. diameter, 120 square inches m/m total sectional area

Branch cables carrying 50 Amperes, comprised of 7 wires, each 2.3 m/m area L.S.G. diameter, 16 square inches m/m total sectional area

Branch cables carrying 25 Amperes, comprised of 7 wires, each 1.5 m/m area L.S.G. diameter, 10.5 square inches m/m total sectional area

Leads to lamps carrying 6 Amperes, comprised of 1 wires, each — L.S.G. diameter, 1.5 square inches m/m total sectional area

Cargo light cables carrying 3.5 Amperes, comprised of 16 wires, each 0.15 m/m area L.S.G. diameter, 2.4 square inches m/m total sectional area

ESCRIPTION OF INSULATION, PROTECTION, ETC.

Main and branch cables: copper, tinned, covered with Para caoutchouc, coated with impregnated jute tape, lead covered, spun with impregnated jute band, double iron bound and jute spun. Circuits of lamps and lamp leads: copper, tinned, coated with caoutchouc and rubber,

Joints in cables, how made, insulated, and protected Soldered and covered with caoutchouc and tape for lamp circuits and leads, metal screw joints contained in watertight boxes on incombustible bases for main and branch cables.

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 and branch cables carried often except where exposed to heat and moisture, where they are carried in iron pipes. Circuit and lamp leads protected by wood battens.

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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 Iron bound, lead covered cables, protected by Iron pipes where exposed to heat and moisture

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 do do do

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

How are cables carried through beams hard wood bushes *through bulkheads, &c.* screwed brass bushes

How are cables carried through decks Iron galvanized stand pipes 10" 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 no

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 yes *supplied with* 2 *voltmeters and* yes, two *amperemeters fixed* on 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 yes

Are any switches, cut outs, or joints of cables fitted in the pump room or companion no

How are the lamps specially protected in places liable to the accumulation of vapour or gas all fittings screwed vapourtight

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 millions Simens units ~~megohms~~ *per* ~~statute mile~~ kilometer *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 128 ft

Distance between dynamo or electric motors and steering compass 122 ft

The nearest cables to the compasses are as follows:—

A cable carrying 6 *Amperes* close to ~~feet from~~ *standard compass* close to *feet from steering compass*

A cable carrying — *Amperes* — *feet from standard compass* — *feet from steering compass*

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 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. *Builder's Signature.* *Date* 10th March 1909

Blume

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.

W. Lucas Höller

~~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.

20.3.09

REPORT FORM No. 18.—2m.3.4.

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