

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 13797

Port of Hamburg Date of First Survey 13th Novbr. Date of Last Survey 21st Decbr. No. of Visits 11
 No. in on the Iron or Steel Lehr. Schussels Port belonging to Bremen
 Reg. Book Lehr. 80 Built at Stensburg By whom Stensburger Schiffbau Ges. When built 1913
 Owners Deutsche Dampfschiffahrts Ges. "Hansa" Owners' Address Bremen
 Yard No. 334 Electric Light Installation fitted by the Builders When fitted 1913.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 Compound Steam Engine, coupled direct to a Siemens Schuckert dynamo running at about 300 revolutions per minute.

Capacity of Dynamo 123 Amperes at 110 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Eng. Room Whether single or double wire system is used double

Position of Main Switch Board Eng. 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 1 main switch board in Eng. Room with 11 switches, 1 Steering wheel house with 5 switches, 1 aftship with 4 switches, 1 Salon passage with 10 switches, 1 Forecastle with 4 switches, 1 Chawthouse with 4 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 25 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 214 arranged in the following groups:—

A Eng. & Pilot Space	55 lights each of	16	candle power requiring a total current of	25	Amperes
B Midship aft	47 lights each of	16	candle power requiring a total current of	22	Amperes
C " " fore	73 lights each of	16	candle power requiring a total current of	53	Amperes
D Forecastle	27 lights each of	16	candle power requiring a total current of	13	Amperes
E Chawthouse	4 lights each of	20ff 32, 20ff 25	candle power requiring a total current of	5	Amperes
incl. 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	32	candle power requiring a total current of	3	Amperes
18 cluster lamps & 10 Handlamps incl. in A, B, C, D, E.					
2 Cargo lights of			candle power, whether incandescent or arc lights	8	

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

Where are the switches controlling the masthead and side lights placed Chawthouse

DESCRIPTION OF CABLES.

Main cable carrying	123	Amperes, comprised of	19	wires, each	3.7	S.W.G. diameter,	10	square inches total sectional area
Branch cables carrying	50	Amperes, comprised of	19	wires, each	1.5	S.W.G. diameter,	25	square inches total sectional area
Branch cables carrying	25	Amperes, comprised of	7	wires, each	2.5	S.W.G. diameter,	16	square inches total sectional area
Leads to lamps carrying	6	Amperes, comprised of	1	wires, each	1.5	S.W.G. diameter,	1	square inches total sectional area
Cargo light cables carrying	8	Amperes, comprised of	25	wires, each	1	S.W.G. diameter,	0.5	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main and branch cables copper tinned, coated with Papa coutchouc, coated with impregnated jute tape, lead covered, spm with impregnated jute band, double ironbound and spun with asphalted.
Circuits & lamp leads: copper tinned coated with coutchouc & rubber & spm with tape insertion.
 Joints in cables, how made, insulated, and protected Soldered and coated with coutchouc and tape for lamp circuits and leads, metallic screw joints in water tight 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 exposed to moisture, where they are led in iron boxes. Circuits & lamp leads protected by moud. battens.

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 leads covered cables, protected by iron casings.

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

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

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

How are cables carried through decks Iron galvanized stand pipe 12" high, filled with asphalt

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 by iron casings

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 by iron casings

Where are the main switches and fuses for these lights fitted steering house & fore-castle

If in the spaces, how are they specially protected iron casings

Are any switches or fuses 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 —

Is the installation supplied with a voltmeter yes and with an amperemeter yes fixed main switch 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 50 million ^{ohms} ~~megohms~~ per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 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.

The Builders are the Electrical Engineers

Date —

COMPASSES.

Distance between dynamo or electric motors and standard compass 130

Distance between dynamo or electric motors and steering compass 145

The nearest cables to the compasses are as follows:—

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

Flensburg — Gesellschaft

[Signature]

Builder's Signature.

Date 5 January 1914

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.

It is submitted that this vessel is eligible for

THE RECORD. Elec. light.

JWD
12/1/14

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

[Signature]

Committee's Minute

TUE. JAN. 13. 1914



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