

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 10622

Port of Rotterdam Date of First Survey 24/3 18 Date of Last Survey 14/9 18 No. of Visits 6
 No. in Reg. Book on the Iron or Steel Seven Steam Tugboat "Tillett" Port belonging to Amsterdam
 Built at Rotterdam By whom Meun. M. J. J. J. J. When built 1917
 Owners Java China Japan Lines Owners' Address Amsterdam
 Yard No. Electric Light Installation fitted by M. J. J. J. J. When fitted 1917-18

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One compound steam engine direct coupled with continuous current dynamo
One single cylinder steam engine direct coupled with continuous current dynamo

Capacity of Dynamo 300 Amperes at 110 Volts, whether continuous or alternating current
100

Where is Dynamo fixed in engine room Whether single or double wire system is used double wire

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

Positions of auxiliary switch boards and numbers of switches on each switchboards with 10 p. switches and 10 d. p. fuses
16 in gangways 1 quadrant 1 chart 1 W.C. 2 off, 6 2nd class, 5 3rd class 9 Eng. room

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-oxidisable metal yes and constructed to fuse at an excess of fifty 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 509 arranged in the following groups:—

A	18	lights each of	10 1/2 watt fil	candle power requiring a total current of	16	Amperes
B	42	lights each of	32 watt fil	candle power requiring a total current of	24	Amperes
C	80	lights each of	32 watt fil	candle power requiring a total current of	50	Amperes
D	76	lights each of	32 watt fil	candle power requiring a total current of	28	Amperes
E	67	lights each of	32 watt fil	candle power requiring a total current of	24	Amperes
F	36	lights each of	32 watt fil	candle power requiring a total current of	36	Amperes
G	2	Mast head light with 1 lamps each of	52 1000 watt fil	candle power requiring a total current of	0.8	Amperes
H	2	Side light with 1 lamps each of	52 watt fil	candle power requiring a total current of	0.8	Amperes
I	18	Cargo lights of	5 x 32	candle power, whether incandescent or arc lights		

If arc lights, what protection is provided against fire, sparks, &c. No arc lights

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

DESCRIPTION OF CABLES.

Main cable carrying	300 Amperes, comprised of	31 wires, each	12 S.W.G. diameter,	0.511 square inches total sectional area
Branch cables carrying	16 Amperes, comprised of	7 wires, each	12 S.W.G. diameter,	0.0567 square inches total sectional area
Branch cables carrying	10 Amperes, comprised of	7 wires, each	15 S.W.G. diameter,	0.046 square inches total sectional area
Leads to lamps carrying	2.4 Amperes, comprised of	1 wires, each	17 S.W.G. diameter,	0.0024 square inches total sectional area
Cargo light cables carrying	1.5 Amperes, comprised of	2 x 7 wires, each	25 S.W.G. diameter,	0.002 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

vulcanised indiarubber cables of 960 megohm p.k. insulation
protected in engine room and tunnels by galvanised wires

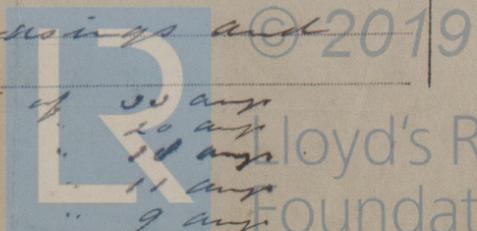
Joints in cables, how made, insulated, and protected no joints in cables, joints are made in fuse boards

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

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 led in teak wooden casings and galvanised iron pipes

G	90 1/2 watt fil	candle power requires a total current of	30 amp
H	32 watt fil	"	20 amp
J	40 ventilators	"	10 amp
K	27 ventilators	"	11 amp
L	Motor 1 D.C.P.	"	9 amp
M	70 1/2 watt fil	candle power	26 amp



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Always accessible*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *and canvas*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *galvanized wire*

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

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

How are cables carried through beams *through lead and fittings* through bulkheads, &c. *and fittings*

How are cables carried through decks *through special copper fittings*

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

If so, how are they protected *in coal bunkers by galvanized iron pipes in cargo spaces by wooden boards*

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 extra strong fittings*

Where are the main switches and fuses for these lights fitted *in engine room*

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

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

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 *600* 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.

Mynssen & Co Electrical Engineers Date *May 1910*

COMPASSES.

Distance between dynamo or electric motors and standard compass *43'-0"*

Distance between dynamo or electric motors and steering compass *84'-0"*

The nearest cables to the compasses are as follows:—

A cable carrying <i>8.5</i> Amperes	<i>12 3/4</i> feet from standard compass	<i>12 3/4</i> feet from steering compass
A cable carrying <i>16</i> Amperes	<i>16 3/4</i> feet from standard compass	<i>16 3/4</i> feet from steering compass
A cable carrying <i>20</i> Amperes	<i>12 3/4</i> feet from standard compass	<i>12 3/4</i> feet from steering compass
	<i>16 3/4</i>	<i>16 3/4</i>

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.

J. H. L. de Leeuw Builder's Signature. Date *26th September 1910*

GENERAL REMARKS.

The installation has been made in accordance with the Rules, worked satisfactory when tried and meets in my opinion the approval of the Committee **submitted that this vessel is eligible for THE RECORD.**

J. W. Beunke
10-10-10
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

56,717—Trans (or)

