

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 12167

Port of Rotterdam Date of First Survey 23-11-21 Date of Last Survey 21-2-22 No. of Visits 10
 No. in Reg. Book on the Iron or Steel S.S. Gemma Port belonging to Rotterdam
 Built at Schiedam By whom Scheepb. Nij. v. Waterweg When built 1921
 Owners v. Nieuelt Gondriaan Owners' Address Rotterdam
 Yard No. 111 Electric Light Installation fitted by A. de Hoop When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 dynamo's resp. 5 & 11 K.W. compound wound. Engines vertical single cylinder suitable for superh. steam 322° Cels. 100 lbs.
 Capacity of Dynamo's 45 @ 100 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed in Engine room Whether single or double wire system is used double wire
 Position of Main Switch Board near dynamo's having switches to groups 10 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Forecastle, Chartroom,
2 in Salondeckhouse, 3 in Midship, 3 in Engine room, Poop.

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 100 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 yes
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes, porcelain

Total number of lights provided for 329 arranged in the following groups:—

Group	Description	Number of Lights	Candle Power	Amperes
A	Forecastle	4	32	1.15
B	Chartroom	2	32	5.0
C	Salondeckh.	21	32	15.-
D	Midship	17	32	5.-
E	Deck	10	32	5.3
	2 Mast head light with 2 lamps each of	32	32	0.6
	2 Side light with 2 lamps each of	32	32	0.6
	10 Cargo lights of	5 x 16		

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 .003" S.W.G. diameter, .1000 square inches total sectional area
 Branch cables carrying 36 Amperes, comprised of 7 wires, each .004" S.W.G. diameter, .0225 square inches total sectional area
 Branch cables carrying 15 Amperes, comprised of 7 wires, each .030" S.W.G. diameter, .0070 square inches total sectional area
 Leads to lamps carrying 0.5 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .0025 square inches total sectional area
 Cargo light cables carrying 1.5 Amperes, comprised of 33 wires, each 30 S.W.G. diameter, .003900 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised rubber insulated, lead covered in screwed iron tubes

Joints in cables, how made, insulated, and protected

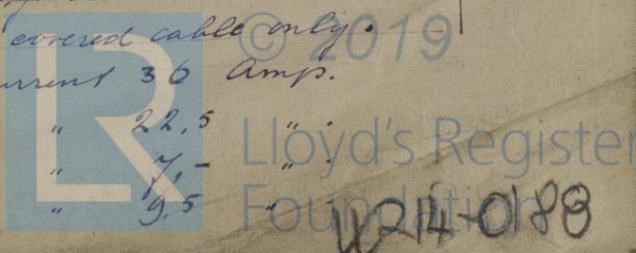
No joints.

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 yes

How are the cables led through the ship, and how protected Main cables and wiring in Eng room and on deck protected by iron tubes, w.t. fitted. Salom & Off. rooms lead covered cable only.

Location	Description	Number of Lights	Candle Power	Amperes
F.	Decklights	35	30 x 16, 5 x 100 e.p.	36
G.	Engine room	00	" " " 64 x 32, 4 x 200	22.5
H.	"	3	motors resp. 1/2, 1/2 & 1/2 H.P.	4.5
I.	Poop	33	lights each of 32 e.p.	9.5



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 *screwed iron tubes*

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

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

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

How are cables carried through beams *inscrewed tubes* through bulkheads, &c. *same*

How are cables carried through decks *same*

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 screwed iron tubes*

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 fuses for these lights fitted _____

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 *watertight plugs*

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 *two*, fixed *Main Sw. 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 *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.

J. Decker Electrical Engineers Date *15-11-22*

COMPASSES.

Distance between dynamo or electric motors and standard compass *130 ft*

Distance between dynamo or electric motors and steering compass *110 "*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>21</i>	Ampere	<i>18</i>	feet from standard compass	<i>5</i>	feet from steering compass
A cable carrying	<i>0.1</i>	Ampere	<i>10</i>	feet from standard compass	<i>3</i>	feet from steering compass
A cable carrying		Ampere		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 *every* course in the case of the standard compass and *nil* degrees on *every* course in the case of the steering compass.

NEW WATERWAY SHIPBUILDING Co.

J. Decker Builder's Signature. Date _____

GENERAL REMARKS.

MANAGING DIRECTOR.

This installation has been fitted in accordance with the Rules and was found in a good working condition when tried and minute in my opinion the Committee's approval.

It is submitted that this vessel is eligible for THE RECORD, Elec. Light. *24 Oct 22* *6/3/22* *J. Decker* Surveyor to Lloyd's Register of Shipping.

Committee's Minute FEB 10 MAR 1922

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

