

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4832

Port of *Trieste* Date of First Survey *15.3.18* Date of Last Survey *24.8.20* No. of Visits *six*  
 No. in Reg. Book on the Iron or Steel *S.S. Brenda* Port belonging to *Trieste*  
 Built at *Trieste* By whom *Cantiere San Rocco* When built *1920*  
 Owners *Navigazione Libera Triestina* Owners' Address *Trieste*  
 Yard No. *34* Electric Light Installation fitted by *Cantiere San Rocco* When fitted *1920*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

An additional 9.2 Kw set fitted 8.24 for Refrig plant (not in parallel)  
 compound wound dynamo (8 Kw) coupled to a single cylinder vertical steam engine

Capacity of Dynamo *73* Amperes at *110* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *in E.P.* Whether single or double wire system is used *doubled*

Position of Main Switch Board *near dynamo* having switches to groups *5* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *One with 6 switches in E.P. One with 2 switches under forward mast and one with 2 under after mast. One principal switch board with 4 switches and 2 secondary with 4 switches in the Eng. house. Two with 4 in telecon. One with 2 in poop. One with 8 in Chartroom.*

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*

Total number of lights provided for *223* arranged in the following groups:—

A *53 metal* lights each of *16* candle power requiring a total current of *8* Amperes

B *49 carbon* lights each of *36 of 10, 12 of 16, 1 of 32* candle power requiring a total current of *18.7* Amperes

C *93 metal* lights each of *16* candle power requiring a total current of *14* Amperes

D *28 carbon & metal* lights each of *5 of 32, 1 of 25, 17 of 16, 5 of 5* candle power requiring a total current of *10* Amperes

E *Wireless* lights each of *—* candle power requiring a total current of *15* Amperes

*8 cabin ventilators*

*2 Mast head light with 1 & 2 lamps* each of *32* candle power requiring a total current of *in group D* Amperes

*2 Side light with 2 lamps* each of *32* candle power requiring a total current of *in group D* Amperes

Group B Cargo lights of *10 & 16* candle power, whether incandescent or arc lights *incandescent*

If arc lights, what protection is provided against fire, sparks, &c. *none*

Where are the switches controlling the masthead and side lights placed *in Chartroom*

## DESCRIPTION OF CABLES.

Main cable carrying *74* Amperes, comprised of *19* wires, each *16* S.W.G. diameter, *0.060* square inches total sectional area

Branch cables carrying *15* Amperes, comprised of *7* wires, each *19* S.W.G. diameter, *0.0086* square inches total sectional area

Branch cables carrying *14* Amperes, comprised of *7* wires, each *19* S.W.G. diameter, *0.0086* square inches total sectional area

Leads to lamps carrying *2.25* Amperes, comprised of *3* wires, each *21* S.W.G. diameter, *0.0024* square inches total sectional area

Cargo light cables carrying *18.7* Amperes, comprised of *7* wires, each *16* S.W.G. diameter, *0.017* square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

conductors are tinned, then covered with two coating of rubber, then with rubber coated tape. The covered with lead (in insulation) then cotton and armoured.

Joints in cables, how made, insulated, and protected *in W.T. junction boxes*

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

How are the cables led through the ship, and how protected *armoured cables fastened with screwed clips*



**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 *announced cables or iron tubes or lead covered*

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

What special protection has been provided for the cables near boiler casings *announced and iron tubes*

What special protection has been provided for the cables in engine room *announced and iron tubes*

How are cables carried through beams *announced* through bulkheads, &c. *W.T. tubes*

How are cables carried through decks *W.T. tubes*

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

If so, how are they protected *announced*

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 *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 *yes*, fixed *Main 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.

*CANTIERE SAN RUCCO S. A.*  
*Opiumi* Electrical Engineers Date *12/10/1920*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *about 90 feet*

Distance between dynamo or electric motors and steering compass *do*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>13</i>	Amperes	<i>12</i>	feet from standard compass	<i>12</i>	feet from steering compass
A cable carrying	<i>1</i>	Amperes	<i>6</i>	feet from standard compass	<i>6</i>	feet from steering compass
A cable carrying	<i>1/2</i>	Amperes	<i>in to</i>	feet from standard compass	<i>in to</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 *none* degrees on *—* course in the case of the standard compass and *—* degrees on *—* course in the case of the steering compass.

*CANTIERE SAN RUCCO S. A.*  
*DIREZIONE TECNICA*  
*Opiumi* Builder's Signature. Date *12/10/1920*

**GENERAL REMARKS.** *This installation has been fitted in accordance with the Rules; it has been tested at the full load and found satisfactory.*

*It is submitted that this vessel is eligible for THE RECORD. See Lt. Kell 28/10/20.*

*R. P. Farrier*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 11. 13. - 21. transfer