LABORATORY NOTES

No. 2 A.S.

EDWARD WESTON,

NEWARK, N. J.

Notes on some Bor Salts of Nickel & Boron

The boro-sulphate of nickel, or boro-chloride is decomposed by the addition of ammonia an abundant greenish blue precipitate being formed, which is soluble in excess of ammonia forming azure blue clear solution.

The precipitate is readily dissolved by sulphuric acid forming a green solution.

The ppt is soluble in $HgNO_3$ and in HCl

The solution in $HgNO_3$ gives a faint indication of Cl on adding $AgNO_3$

The Sol in $HgNO_3$ gives an abundant white ppt with Pb $C_2H_3O_2$

The ppt is soluble in NH_4Cl

July 23rd 1879

Lamps for Machines

No 2 14 A. 10 M. Requires a magnet with a hollow core 2⅛ Long. Hole inch in diameter, Outside Diameter of Core

3 Layers No 12 (W. & Mores Gauge) on each leg (33 Cons on each leg)

Distance of legs apart, from centre to centre 2½ ins.

Yoke plate of cast iron

Tips for single light on this machine are long (Cone of 90° not included)

Diameter of tip.

No 1 Simple Light

16 A. 11 M.

Magnet Core 2⅛ long, Outer diameter ins

Diameter of hole 9/16

Distance of legs apart (from centre to centre) inches

3 Layers No 12 (W & M Gauge) on each leg

11 Cons on each layer

The tip is ½ long and the cylinder is surmounted by a cone of 90°.

Laboratory in M + E R R ace Shop.

Newark Aug 30th 1880.

Dancroft's Gas Lighting & Extinguishing System.

Salem, Mass.

.0016

Longest Circuit 11000 feet No 12. Dwt. Sample (= .08. inch). 26 Lamps.

The second Circuit is 7,500 feet with 24 Lamps. Wire as before

The third Circuit is 5.800 feet with 25 Lamps. Wire as before ~~25 Lamps~~.

Res of ft of Leading wire (Copper No 12 A. G.) = .0016158406 Cube.

Res of First Circuit (without helices & Platinum wires) = 1.7.774248 ℧.

Second Circuit do do 12.1188048 ℧

Third " " " 9.3718 7071

18 Ohms

" 7

Cost of laying Wire underground (at Salem, Mass)
given by Wm. Bancroft.

Brick Line walks Cobblestone gutters &
Macadamized street crossings. Wire buried from
10 to 22 in from surface. Wire laid about equally under
~~side~~ Cobblestone & Bricks. Absolute cost 293.60
per mile of 12x6 Bishop Compound copper wire.
Cost of Labor $884 per mile.

Newark N. J.
April 7th 1881

New Series of Notes commenced on next page

Newark April 6th 1881

August 16th 1881

Cincinnatti Electric Light Company (for Cincinnatti Exposition)

Incandescent Lamp Circuit = 4000 ft (Wire)

1st Incandescent ~~Lamps~~ Machine

to run 50 fifty ohm Lamps