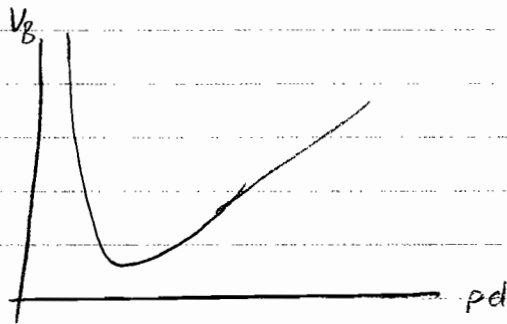


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Exp.

Breakdown of gas by DC field. A small amount of free electrons (generated by static electricity, cosmic rays, etc.) are accelerated towards the anode. If they gain enough energy before a collision with a neutral, they can ionize it, generating an electron and ion. This avalanche continues until the electrons reach the anode and are absorbed. Meanwhile, the ions are slowly accelerated towards the cathode where they impact it and are neutralized. However, secondary electrons are emitted, and if there are enough, this process sustains itself, and breakdown is reached.



For $d \approx 20$ cm, $P \approx 200$ mTorr $V_B \sim 200$ V