

Analogy between the London Equations of Superconductivity and Meissner Effect

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This research is able to make use of available literatures in making a case for a theoretical analogy between the London brothers Laws of Superconductivity, and the Meissner Effect. Mathematical approach was involved in deriving equations that actually prove that an external applied magnetic field through the superconducting materials actually penetrate up to the vortices length, or the penetration depth in the inside of the superconducting material, called the London Penetration depth, before the field exponentially decays completely. Thus, disagreeing with the Meissner Theories that states that for a field through the superconductors, a complete diamagnetic effect takes place.

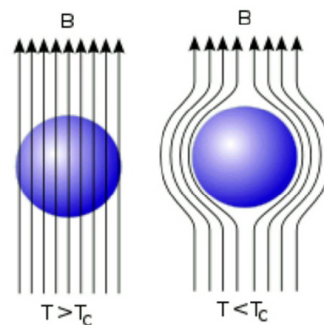


Fig: Magnetic Field through normal and Superconducting Metals respectively