

GLOWING CONNECTION EXPERIMENTS WITH ALTERNATING CURRENTS BELOW 1 A

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ABSTRACT

It was experimentally proven that a glowing connection can develop in an electrical switch at a terminal connection comprising of a connector that utilizes a spring action against a conductor to provide electrical contact in household electrical appliances where vibration exists. This can happen at a current flow such as 0.6 A at 120 V. Further, the glow can provide sufficient heat to degrade plastic in contact with the terminal components. Violent arcing involving intense gasification can then develop on nearby plastic areas, sometimes accompanied by intensely glowing areas inside the plastic. Sometimes the intense glowing areas inside plastic develop without the violent arcing. The intense arcing or the glow inside plastic often develops into flaming, which can be of sufficient intensity and duration to ignite combustible materials near the connection.

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