

# *The Technology Consortium, Ltd.*

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## **Arc-Flash Studies...**

### **Why Conduct Arc-Flash Studies:**

- ***Arc-Flash Compliance Certificates are required by OSHA and NFPA...***
- ***Arc-Flash inspection identifies opportunities to improve your electrical efficiencies...***
- ***Arc-Flash studies validate your facility and verify the proper operating spare parts...***
- ***Arc-Flash inspection will increase operator and plant safety...***

### **What is an Arc-Flash???**



***Arc-Flashes are caused when an employee or equipment comes in close proximity to, or in contact with, a conductor or an energized circuit. Arc fault (Flash) occurs due to reduction of dielectric clearances between conductors. Once the path is established, short circuit current flows through air until the upstream protection device clears the fault.***

- ✓ *Phase-to-ground or phase-to-phase incidents result in an Arc-Flash fault.*
- ✓ *The resulting Arc produces "Plasma", which has a much higher degree of conductivity than air.*
- ✓ *The "Plasma-Arc" provides the conductivity path for the current source and consumes all materials within close proximity.*
- ✓ *Arc-Flashes may produce temperatures in excess of 5,000 Degrees Fahrenheit and generate high-pressure waves (Arc-Blasts).*
- ✓ *Arc-Flash incidents are instantaneous and extremely violent.*
- ✓ *Worn, corroded or failing equipment may also cause the Arc-Flash event.*
- ✓ *This dangerous condition will continue until upstream circuit protection devices react.*

**Every day there are 5 to 10 Arc-Flash incidents in the United States...**

***Prevention is the best way to avoid them...***