SIEMENS
Ingenuity for life

Arc flash hazard analysis

Comprehensive solutions to minimize risk from arc flash hazards

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Siemens can support you with comprehensive services to meet OSHA NFPA 70E standards. Experienced power system engineers are highly trained in NFPA and IEEE guidelines, providing systematic and accurate Arc Flash Hazard Studies.

Systematic and accurate solutions to minimize risk from arc flash hazards

Rely on Siemens to provide thorough Arc Flash Hazard Studies, comprehensive safety training, and related services designed to enhance the safety of your personnel and improve the reliability of your operations— while satisfying OSHA requirements.

Arc flash is a type of electrical explosion that results from an arc fault, and can cause serious injury in numerous worker cases each year. As power grids and facilities grow, regular analysis and maintenance of power distribution systems are imperative.

How arc flash analysis works

Siemens will analyze data from your power distribution systems, determine incident energy levels, arc flash boundary (AFB), and the required level of personal protective equipment (PPE) your employees and contractors need to safely service the equipment.

In addition, Siemens provides consulting, documentation, and training to advise your organization on the operation of power distribution systems and minimizing the risk of arc flash.

OSHA NFPA 70E requires that an Arc Flash Hazard Analysis be performed prior to working on or near electrical equipment containing exposed energized conductors. An Arc Flash Hazard Study helps you:

- Improve employee safety
- Enhance your electrical system safety and efficiency
- Supply safety information to subcontractors
- Assist in compliance in regulations
- Provide documentation for lowered insurance rates
- Provide documentation for workers compensation cases

Service offerings for minimizing arc flash hazard risk

Scope of an arc flash hazard analysis

1) **Short circuit calculations** – Siemens will either use your data or make calculations for you to identify bolted and arcing fault levels at key points in a power distribution system.
2) **Protective device coordination** – Using your electrical systems coordination study, Siemens determines the duration of the arcing faults. If you require an up to date study or one-line diagram, Siemens can provide one as an option.
3) **Arc flash hazard calculations** – The incident energy level, the flash hazard boundary, and the PPE required are determined for each location.
4) **Documentation** – The data and calculations are compiled for you in a comprehensive report, which contains information necessary to comply with regulatory requirements.
5) **Unsafe work locations** – The report identifies work locations having incident energy levels in excess of available PPE ratings.
6) **Arc flash hazard mitigation** – Recommendations will be made for minimizing arc flash hazards through changes in system protection or operational procedures.
7) **Arc flash hazard labels** – In addition to the report, you will receive a label for each device containing the flash hazard boundary distance, incident energy level, PPE category, and shock hazard.

Siemens Remote Racking Devices

Safety Remote Breaker Racking System – complete arc flash protection for switchgear racking procedures

Traditionally, breaker racking on an energized system required operators to work within the arc flash boundary, at risk from intense heat, percussion forces, and airborne debris should a fault explosion occur. Now, with Siemens Remote Racking Devices, the operator can be positioned safely outside the arc flash boundary while racking any manufacturer's breaker in or out of a live bus. In addition, some units feature Profile Torque Protection technology allowing monitoring and protection of breakers and switchgear during racking.

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