Global Risk Consultants®

Arc Flash Risk Assessment

Dedication in providing services to address today's challenges

You know and trust TÜV SÜD GRC for Infrared Thermographic services. Now, let us help you with your Arc Flash Protection needs.

An arc flash occurs either when an electric current passes through air between conductors or from a conductor to ground instead of its intended path. The arc across the air gap can result in temperatures as high as 35,000° Fahrenheit! Arc flash conditions can occur when work is being conducted on energized equipment, or during an electrical equipment failure. Electrical systems with operating voltages over 120V are susceptible to arc incidents.

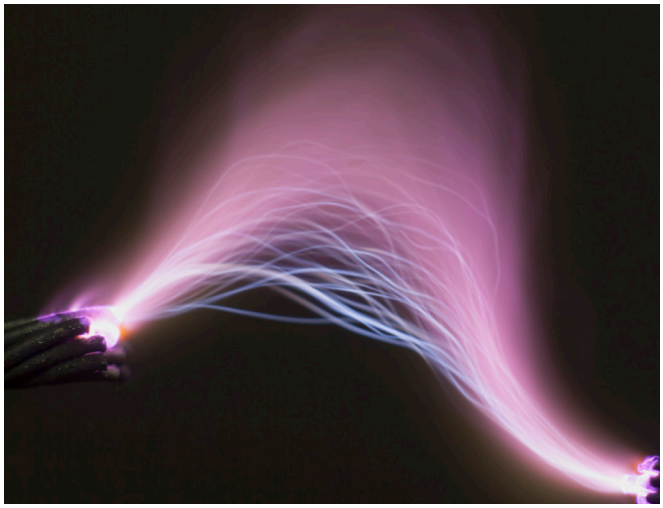
This high intensity heat can severely burn skin and set clothing on fire. The heat can also liquefy or even vaporize metal, causing it to rapidly expand resulting in explosive pressure waves, blinding light and deafening sonic blasts, causing further injuries and fatalities. The heat can also cause fires in nearby combustibles.

There are regulations in place to enforce electrical safety in order to help prevent arc flash injuries. NFPA 70E: Standard for Electrical Safety in the Workplace, is a consensus standard that OSHA recognizes as the primary reference standard for their electrical safety regulations, and suggests that an arc flash assessment be done every 5 years or after any major modification to the electrical distribution system.

The recent 2017 National Electric Code (NEC) update specifies that service equipment above 1200A need an arc flash assessment. Several states have already adopted the 2017 NEC and this code can be expected to become implemented nationwide. As this code becomes the standard, arc flash assessments will become mandatory.

Goals of an Arc Flash Assessment

- Calculate the incident energy that may impact a worker
- Calculate the appropriate arc flash protection boundary



- Determine the proper personal protective equipment (PPE)
- Facilitate safe working conditions

4 Phases of a successful Arc Flash Assessment

- Data Collection
- Engineering Analysis of the Data
- Report and PPE Labelling
- Training

Why choose TÜV SÜD GRC for your Arc Flash Protection needs?

Our Electrical P.E. led arc flash service is licensed throughout the United States and provides a highly experienced team that delivers a consistent, high quality service regardless of geographic location.

In addition to the initial assessment, TÜV SÜD GRC offers our clients:

Short Circuit Analysis - This process includes calculations of the available fault current at each bus in the electrical distribution system. The fault current is then compared with the interrupting or withstand rating of the protective devices. The comparison between the two values determines whether or not the protective devices are adequately rated.

Protective Device Coordination Study - Evaluates the adequacy of the protection provided for the components of the electrical system, develops recommendations for settings and ratings of protective devices. A properly-coordinated power system ensures that the protection device closest to the fault will interrupt the fault.

One-Line Electrical - Recognized as a critical element to maintaining, understanding, and troubleshooting a facility's electrical system, our engineers can develop this important tool as part of our service, if one is not available.

Training - We will work with your team to develop a training program to prepare your employees to operate safely in this environment.

WARNING

Arc Flash and Shock Risk

Appropriate PPE Required

6 in	Arc Flash Boundary
0.17 cal/cm^2	Incident Energy at 1 ft 6 in
PPE	Nonmelting or Untreated Fiber with Weight >= 4.5 oz/sq yd
208 VAC	Shock Risk when cover is removed
00	Glove Class
3 ft 6 in	Limited Approach
Avoid Contact	Restricted Approach

Location:	**AP-10A1**

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Warning: Changes in equipment settings or system configuration will invalidate the calculated values and PPE requirements

Arc Flash Label

Related services

- Fire Protection Engineering
- Boiler & Machinery Engineering
- Infrared Thermographic Surveys
- Natural Hazards Analysis
- Jurisdictional Boiler & Pressure Vessel Inspections
- Loss Control Training
- Property Valuation
- Business Continuity Planning
- Process Safety Management
- Code and Project Services

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