



Arc Flash Hazard Analysis

The Arc Flash Hazard analysis module is designed to analyze and promote the electrical safety for employees working on or near electrical equipment and energized lines. The module calculates the short-circuit fault current at any point in the network; finds the clearing time using the primary or backup specified time-current curve from our wide library of devices and calculates the resulting incident energy and risk level according to either IEEE-1584™ or NFPA-70E©. You may even produce the corresponding “ready-to-print” warning stickers.

Program Features

Integrated in our time current coordination program CYMTCC and in our power engineering analysis software CYME, this complete Arc Flash simulation module allows you to evaluate the safety risk on virtually any part of your network. It computes the necessary parameters required to assess the risk level and adopt the adequate safety procedures, minimizing the risks of burns and injuries.

The CYME Arc Flash module is compliant with industry recognized standards and methods to perform arc flash hazard calculations for industrial, distribution and transmission systems. Such standards are:

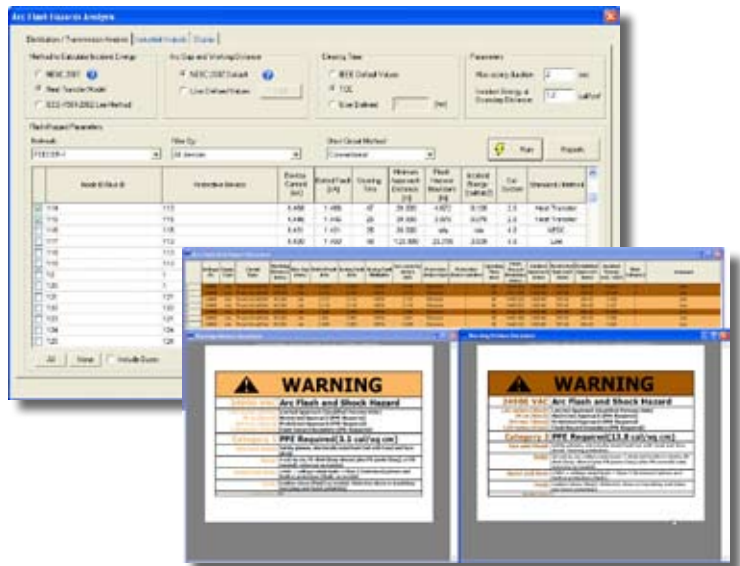
- NFPA-70E© 2004, The Electrical Safety Requirements for Employee Workplaces.
- IEEE-1584™ 2002, Institute of Electrical and Electronic Engineers.

For the arc flash analysis in distribution and transmission systems, CYME has introduced two new algorithms to cater for line-ground faults, which represent about 80% of the faults occurring on a distribution system. This added functionality facilitates the evaluation of arc flash hazards on any part of any network. The new algorithms are based on:

- NESC© 2007.
- Heat Transfer Model, based on Heat Flux Calculations.
(Model published in Electrical Safety Handbook, By John Cadick, Mary Capelli-Schellpfeffer, Dennis K. Neitzel, Published by McGraw-Hill Professional, 2001, Chapter 3.52)

Seamless Interface

The bus data of any network created with our software can be supplemented with Arc Flash related information such as working distance, bus gap, connected equipment and exposed circuit in cubic enclosures or in open air. In addition, the Arc Flash Hazard module calculates the maximum bolted short circuit levels at the desired work place (bus) for Arc Flash Hazard calculations.



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Promote electrical safety by assessing the risk level of arc flash hazards, and suggesting safety measures for distribution, transmission and industrial electrical networks.

Capabilities

- One-line diagram and user-friendly GUI for all systems.
- Batch mode simulation that will allow the analysis for every bus in the network in one single simulation.
- Short-circuit current can be calculated using ANSI@ or conventional fault calculation methods. Using ANSI@, the reduced fault contribution of motors and generators are taken into consideration.
- Calculation using default values depicted by standards, or using user-defined values.
- Accurate opening time is obtained by linking to the protective devices library provided in CYMTCC.
- The module is equipped with the automatic detection and validation of protection schemes in the network.
- The display of results in a tabular report.
- Possibility to generate required results in a chart.
- Custom warning stickers to display information such as the Arc Flash hazard boundary, energy density, risk category and personal protective equipment.

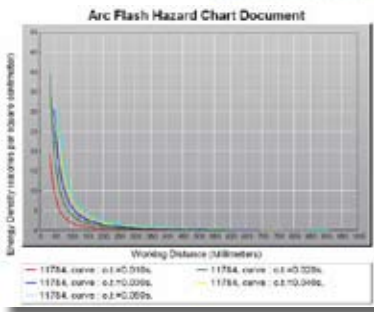
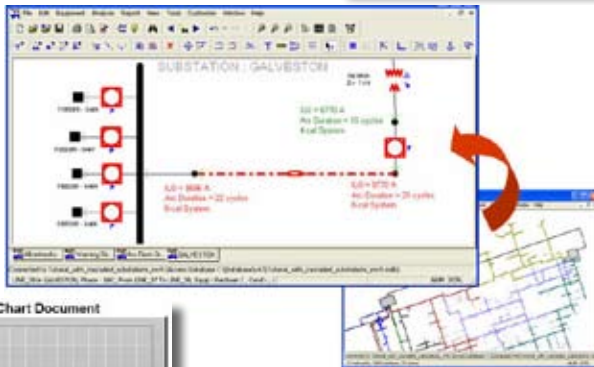
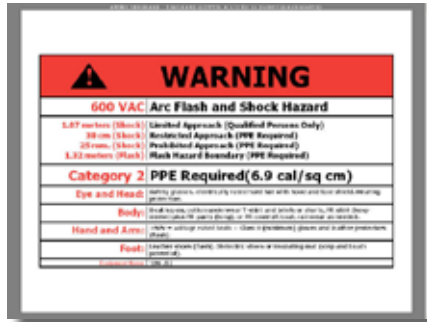
Warning Labels

The program generates reports that can be printed directly on Arc Flash Hazard weatherproof warning stickers.

These warning stickers include all the necessary information such as:

- Arc flash hazard boundary.
- Energy density.
- Hazard / Risk category class.
- Personal Protective Equipment (PPE).
- Potential shock hazard.
- Limited, restricted and prohibited approach boundaries.
- Equipment identification.

Multiple label formats are available, and the program provides the capability to customize your own labels.



CYME International (part of Cooper Power Systems)

1485 Roberval, Suite 104
St-Bruno, QC Canada J3V 3P8
P: 450.461.3655
F: 450.461.0966
P: 800.361.3627 (Canada and USA)

www.cyme.com | www.cooperpowereas.com
info@cyme.com

