

# **ARC FLASH STUDIES**

## **OBJECTIVES**

It is an electrical protection study whose objective is to determine the level of risk of burns due to an electric arc fault that a qualified worker who is going to develop work within a switchgear or electrical device that is energized, as well as the Personal Protective Equipment that should be used to control risk.

This type of study is carried out to comply with the standards:

- 1. IEEE 1584-2002 IEEE Guide for Performing Arc Flash Hazard Calculations.
- 2. NFPA 70E®: Standard for Electrical Safety in the Workplace®, 2018 Edition.

The studies are developed by engineers with proven experience in the field of protection of industrial electrical systems.



Fig. 1 Arc flash faut inside Metal-Clad switchgear.

#### **PRACTICAL RESULT**

The results of the levels of risk of burns, the risks of electrocution and the requirement of **Personal Protective Equipment** are printed on labels that are pasted to the electrical distribution switchboards in accordance with the requirements of the standards: **National Electrical Code (NEC) and NFPA-70E.** 

The labels are generated in the English language and the safety distances in the electrical system of units and have specifications for use in distribution switchboards.



Fig. 2 Switchgear labeling example and electrician using recommended EPP.

#### **ANALYSIS SOFTWARE**

- ETAP.
- Reference Standards IEEE, ANSI, IEC.

### **ETAP SOLUTION PROVIDER**

**RADTHINK** is recognized as an **ETAP Solution Provider**. It is awarded by the ETAP brand to engineering firms that have staff with the skills, knowledge and resources to develop electrical engineering solutions using ETAP analysis software.



