



TOOL HELPS KEEP DESIGN ELECTRIC'S BUSINESS FIRMLY ON THE GROUND

By Don Horne

Solid grounding practices are now more important than ever. A good grounding system is essential in every electrical application for many reasons. As the fault current potential in electrical systems is climbing, so are conductor sizes. In turn, there is an increased need for better, more capable grounding systems to absorb the higher fault currents.

Additionally, electronics are penetrating more industries with increased

frequency, from traditional manufacturing controls, to modern communications, to the financial industry. This entire infrastructure relies on grounding methods to ensure that data is uncorrupted by noise in the power system. Consequently, electronics are operating at considerably lower voltages, meaning the grounding system is integral to maintaining data integrity.

As a result of these industry trends,

there has been a distinct movement away from manual tools in favor of more efficient and productive remote hydraulic or battery powered tools. Concurrently, there has been a marked increase in attention to safety precautions and industry regulations.

Electrical contractors are challenged on a regular basis to comply with constantly fluctuating industry standards,

continued on page 9



“**High resistance grounding** provides the same advantages as ungrounded systems yet limits the steady state and severe transient over-voltages associated with ungrounded systems. There is **no arc flash hazard as there is with solidly grounded systems**”

IEEE Std 141-1993

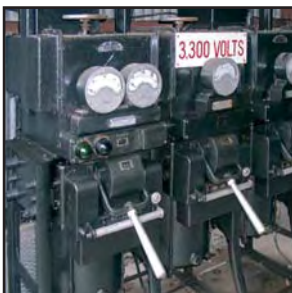
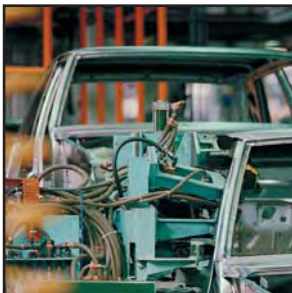


“**High-resistance grounding** for low voltage power distribution systems enhances reliability and uptime of power distribution equipment and is **proven effective in significantly reducing the frequency and severity of arc flash accidents**”

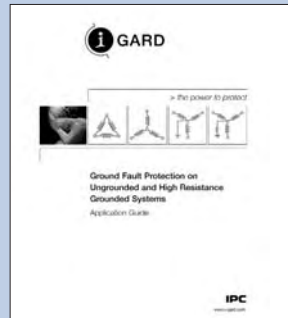
2003 IEEE IAS Electrical Safety Workshop

Industry experts have long recognized that in addition to providing process continuity, high resistance grounding protects employees from arc flash accidents and shock hazard.

is your grounding system really effective?



Learn more by ordering your free copy today:



Ground Fault Application Guide

An overview of grounding principles, product functionality and to determine what solution is best for you.



Ground Fault Conversion Guide

Learn why and how to upgrade to a high resistance grounded system.



iGARD

the power to protect

To request product information, Ground Fault Application Guides or information on a Free Technical Seminar call **1-888-737-4787**

IPC

www.i-gard.com

Design Electric

from page 7

government regulations, and customer specifications. One of the biggest prerequisites for being a successful utility contractor is keeping up with codes and regulations; without adhering to required protocol, contractors are viewed as a liability by prospective customers.

Dan Burrow is one electrical contractor who makes a concerted effort to keep his business at the forefront and in line with codes and requirements. As the owner of Design Electric, a 25-year-old California-based company that serves the San Joaquin Valley area, Burrow performs primarily commercial industrial work for the electrical industry. Currently, Design Electric is involved in television studio and transmitter work in Fresno and surrounding areas, as well as utility work for two major firms statewide.

He's no stranger to the sometimes formidable task of keeping up with code. After Burrow completed work for a large electric utility company, he was told that the tool he used to complete the job could not be found in the company's standards, a rigid set of specifications for grounding applications compiled in a book almost an inch thick. That tool was the Patriot PAT750-18V from FCI-Burndy Products.

Confident in the quality of his labor and the capabilities of the tool, Burrow approached the apparatus engineer, who also served as the main grounding supervisor, to discuss the situation with him.

"I talked to him, showed him what we were doing, gave him some data, and then I actually went through and showed him some of the connections we did on the site," said Burrow. "I put together a grounding sample with standards using the tool. He liked what I showed him and actually wrote me a letter stating that Design Electric had already used the PAT750 in various locations within their buildings, and that he was authorizing us to continue using it. He even intends to work on putting what I showed him into their standards."

With a faster crimp time, improved ergonomic design, and an 18V Nickel Metal-Hydride (NiMH) battery, the PAT750 tool is a one-hand, self-contained crimping solution.

The PAT750 is designed with the versatile tool head, allowing the user to operate in tight spaces, a particularly use-

Burrow added that he is finishing up another substation, a 3,000-square-foot control building with a grid under the computer floor. The substation has become a veritable "model" project, as several engineers from other projects he is working on have walked through the building to examine the different connections he has been using. "Needless to say, they're all impressed."



ful capability in grounding applications. What's more, the tool's 360° head rotation design allows the tool head to operate in virtually any position.

Burrow's fondness for the PAT750 began years ago, in an on-air television studio in Fresno.

"We had a call to install a grounding system in the studio which was filled with existing equipment," he recalled. "There was carpeting on the floors and cable trenches filled with on-air cables, which certainly made the job more challenging."

Burrow found the tool to be a "huge labor saver", citing a situation in which he needed to use an exothermic weld.

"We had four welds to do, and one of them failed," Burrow said. "I had to cut that connection out and do it over with

the PAT750 tool, which worked right away.

"In the end, there is a little bit of time saved on each ground. When that little bit of time is added up over hundreds and thousands of grounds, the time savings becomes significant."

Burrow added that he is finishing up another substation, a 3,000-square-foot control building with a grid under the computer floor. The substation has become a veritable "model" project, as several engineers from other projects he is working on have walked through the building to examine the different connections he has been using. "Needless to say, they're all impressed," Burrow said.