

# Testing Times

A newsletter for the electrical construction and maintenance industry

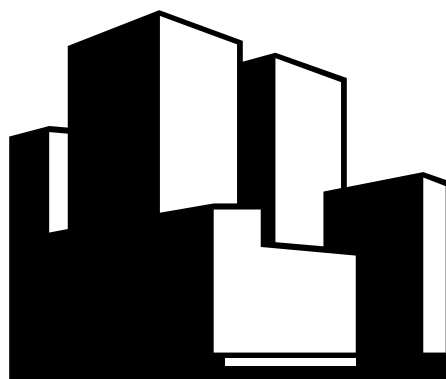
Volume 10 No. 1

## Busway: a good investment?

**B**usway was designed to replace cable and conduit. Although it can be more expensive in material cost than the comparable cable and conduit, it usually has decreased installation time, saving money in labor. Other busway benefits include:

- easy to install busway plugs providing safe connections for personnel
- lower life cycle cost – components can be added, deleted or relocated after the initial installation saving time and money
- predictable characteristics – busway is designed and tested as a system and has published short circuit ratings, voltage drops, etc. making design and application easy
- lower impedance for lower voltage drops and lower energy costs

Busway manufacturers offer a wide range of products designed to suit almost any location. This includes low-amp in-stock busway for small projects, NEMA 3R outdoor rated busway for damp locations, and heavy-duty busway for larger custom-designed applications.



***When properly applied and installed, busway is a time-saving, money-saving, energy-saving addition to almost any facility***

So if busway is such a wonderful product, why wouldn't you use busway for all projects? There are a few applications that are not best suited for busway. It is not designed for use in highly corrosive environments such as battery rooms, chemical plants or in classified hazardous locations. Busway is also not designed to be imbedded in the ground or in concrete.

As with most electrical products, busway is sensitive to proper product selection and application. Indoor busway should generally not be used in

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## Product Safety Alert

### GE MicroVersaTripPlus™ and MicroVersaTripPM™ Trip Units

**G**eneral Electric has issued a Product Safety Alert for MicroVersaTripPlus™ and MicroVersaTripPM™ Trip Units. GE received reports from its customers that units were failing to trip during the initial testing and commissioning process. GE began investigating and determined that a component in some of the trip units was failing in the first month or so of service. The defective component compromises the seal of the part allowing moisture and contaminants to enter the part, resulting in corrosion and possible failure. If this happens, the breaker will no longer be able to trip. Unfortunately, the breaker will give no external indication that this trip unit failure has occurred.

These trip units are used in several of GE's breakers including Power Break® and Power Break II® insulated-case breakers and low-voltage power circuit breaker conversion kits. Products affected are all MicroVersaTripPlus™ and MicroVersaTripPM™ trip units with five buttons on the display, manufactured between December 26, 2000 and June 21, 2002. If you have any questions or concerns about your breakers, please contact GE at (888) 437-3765. \*



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a parking deck. This should be considered a damp location requiring NEMA 3R rated busway. Other application considerations include ambient temperature (busway should be derated for high ambient temperatures) and thermal expansion (expansion joints may need to be added to a busway run). Also, busway needs to be accessible at all points in the run. In high-rise buildings, busway is often installed and covered up by walls. If a portion of busway needs to be replaced, it is inaccessible, making replacement difficult or impossible.

By far, the biggest enemy of busway is water! Busway must be protected against moisture every step of the way from shipping through installation. Construction sites have notoriously poor conditions. Proper planning, storage, handling and installation of busway is critical. Trade coordination is critical too. Construction timelines are always tight. A situation occurred where a general contractor required the electrical contractor to install riser busway before the building was topped off. The busway was energized and blew up at an elbow where rainwater had collected. Elbows at the bottom of riser busway runs are where water tends to collect.

When properly applied and installed, busway is a time-saving, money-saving, energy-saving addition to almost any facility.\*

## HiCon® Chemical Ground Rods

Hood-Patterson & Dewar (H-P&D) is primarily an electrical testing firm. However, we also manufacture a couple of products including one called the **HiCon®** chemical ground rod. Chemical ground rods are used in addition to or in place of traditional ground rods when additional grounding is needed.

A low resistance ground is essential in protecting modern, sensitive communications and electrical equipment. Chemical ground rods are effective in small areas or in difficult soil situations. In addition to offering chemical ground rods, H-P&D offers all types of grounding system design and testing. Please call us for more information at (404) 296-5990.\*

### *Testing Times* by e-mail

We are pleased to offer the *Testing Times* newsletter by e-mail. If you would like to receive our newsletter electronically, please provide your e-mail address to: [Lcosby@hoodpd.com](mailto:Lcosby@hoodpd.com). We will continue to send your newsletter by mail if we do not hear from you. The *Testing Times* is published quarterly. We always appreciate your input. Please send any questions or comments to the editor, Lyn Cosby at [Lcosby@hoodpd.com](mailto:Lcosby@hoodpd.com) or fax (404) 299-3534.

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