

**B&A**

## the forensic engineer

### **BUS DUCT FAILURES**

Brosz and Associates has been retained by a number of clients to investigate the causes of bus duct failures. For example:

A bus plug had failed after the plant experienced a power outage due to an electrical storm. At first, the failure was thought to have been the result of the storm, but further investigation by Brosz and Associates uncovered underlying problems with the bus duct installation, design and workmanship.

Field and factory misalignment of the bus bars can prevent proper mating of joints. Inadequate and improper insulation are others factors, as well as moisture ingress into indoor and outdoor bus duct. In some instances, applying the prescribed torque on the joint bolts still does not make for a good connection. Violations of applicable NEMA/IEEE/UL or CSA Standards are also factors in bus duct failures.

Infrared scans on the bus joints with the covers removed can detect incipient 'hot spot' damage. Precise alignment and accurate torquing are important to ensure acceptable operation.

Bus duct failures in high rise buildings and factories often cause major business interruption, fire and injury and death.

Brosz and Associates has assisted in many bus duct failure cases, providing the in-house expertise of ex-manufacturer's engineering experts to search out and determine the cause of many bus duct problems.

For more information, please contact Brosz and Associates at 905-472-6660.

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