



APPLICATION: INJECTION MOLDING

The Problem:

A plastic parts manufacturer began experiencing unacceptable levels of defective parts in their Injection Molded & Metallizing operations. The company had evidence that the increase in defective parts was due in part to extremely high levels of static electricity generated from the injection molding process and subsequent parts handling.

The electrostatic charges caused significant amounts of process-related contaminants and airborne dust to be electrostatically attracted to the parts. This caused several problems after the parts were metallized, such as efficient manufacturing and quality issues.

These contaminants caused dramatic and unacceptable cosmetic blemishes, resulting in the need for the parts to be re-worked at tremendous direct and indirect cost to the manufacturer.

The Solution:

The manufacturer requested our diagnostic services to measure, document and confirm the occurrences of static electricity in their operations. In addition, the manufacturer requested that we provide a recommendation for eliminating the static electricity and contaminant problems, thereby reducing the number of defective parts.

We were able to identify the causes and locations of their static related defects and because of the diverse molding machinery and operational work areas, we recommended three different tools—the **Vortex**, **Curtain Air** and the **Ion-Jet Air-Knife**—to meet their challenging static control and part blowoff requirements.

Upon install of our Static Control systems this customer reported a significant reduction in defective parts due to static electricity and contamination. The Static Control systems helped to reduce/eliminate part remanufacturing, as well as reduced personnel resources to manually clean parts, increased acceptable quality parts and throughput, and improved general operational efficiencies.