Electrostar-Restoring Equipment Damaged by Smoke and Soot

During a fire, heat pushes the soot causing it to cover everything in its path. Smoke will travel until its energy is used up and reaches cool temperature areas.

Damage from smoke and soot can be significantly more extensive than the fire itself. All smoke residue should be considered acidic and corrosive in nature to metal, glass, plastics, and all types of substrates. **Soot, when tested, is always found to be acidic**. Elevated temperatures combined with an absence of oxygen cause an irreversible chemical reaction called pyrolysis. During this process, fire suppression and fire retardant agents release chemicals such as hydrochloric, hydrobromic, and hydrofluoric. Other materials such as plastic and oils may release sulfuric, nitric or phosphoric acids. The wide variety of chemicals and by-products created by smoke and soot can aggressively penetrate electronics and equipment causing **sudden or gradual corrosion**. This corrosion is often not significant for structural material, but delicate structures, like microelectronics, are strong affected.

Another invisible threat is the electrically conductive state of many smoke particles. Corrosion of surfaces and the deposition soot or conductive layers on circuits can cause crosstalk, overheating, short circuits, and equipment failure. These attacks can happen quickly and immediately, but may also happen gradually. **Equipment left untreated in corrosive conditions will cost more to restore and repair.**

It is essential that this rapid deterioration be abated via application of appropriate corrosion inhibitors until more thorough cleaning is available. This temporary coating neutralizes the soot particles by starving them of oxygen. Chloride testing, performed by our experts throughout the process, determines if surfaces have been thoroughly cleaned.

When faced with the critical decision of how to best handle fire and heat exposure within your business, you can count on our **expert technicians** to provide a **rapid response.** Using **proven recovery methods**, our skilled and experienced staff can **restore your equipment to pre-loss condition.**