NEWSLETTER - NOVEMBER 2018

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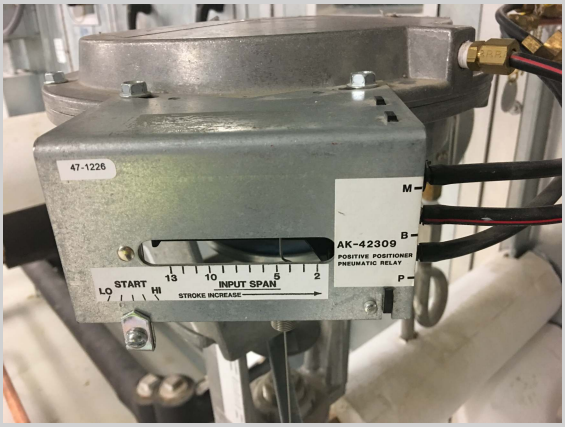
TECH TALK

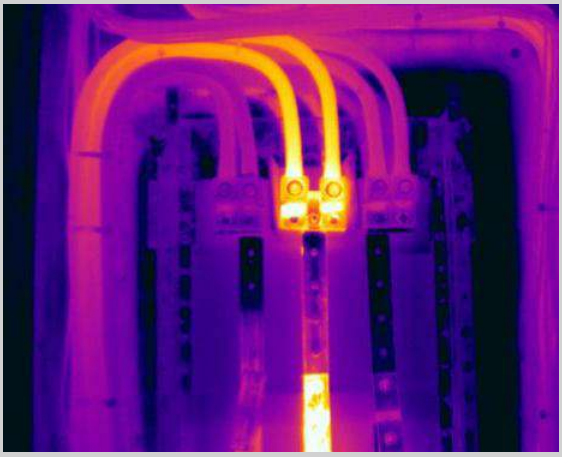
MSC | THE ONLY TRUE HVAC SERVICE COMPANY | WE FIX IT

(973) 884-5000

SERVICE CALLS



A new customer called MSC with **repeated valve and temperature control issues.** After our technician gathered data that showed that control signals were working fine with an AO 4-20 mA signal to the transducer, it soon became apparent that positioners were leaking and failing and did not have good repeatability. MSC recommended and the client agreed to replacing the positioners with higher-quality parts, completely eliminating the problem.

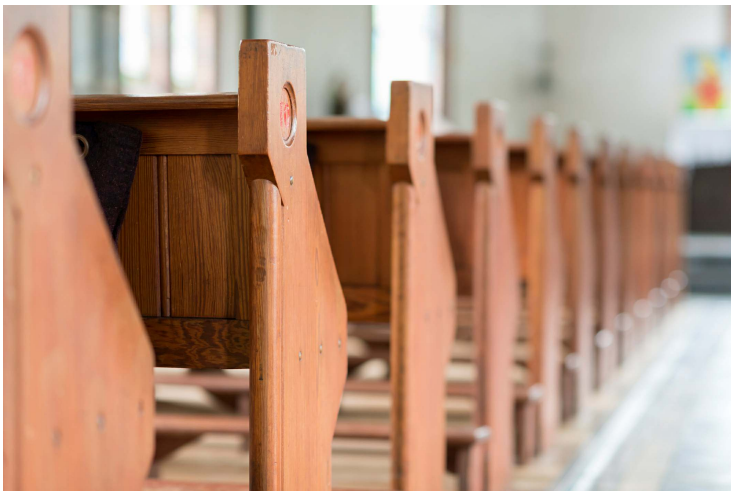


A large air handler supply fan was intermittently tripping a 125-amp breaker in an MCC. The fan was drawing 41 amps on each leg and had 480V present. A thermal imaging camera revealed that the B phase was very warm, and a hotspot on the side of the breaker confirmed a broken or loose connection inside the breaker. MSC located a reconditioned breaker at a substantial savings and had it installed within 48 hours.

LET THERE BE AIR: MSC Solves Church Air Balance Problems

By Pete McGrath

It was the beginning of summer, and church staff knew they had a problem. The left side of the church was always hot, and parishioners were complaining. The choir loft was unbearably hot – just ask the music director – and the infant crying room was stifling. The facility manager reached out to two different HVAC companies to look into their temperature controls. One refused the job and the other recommended installing a new ductless split A/C system for the loft, a proposal the maintenance director found questionable. Finally, he Googled "New Jersey air balance" and found MSC.



First on MSC's agenda: the choir loft. The MSC team suspected that a fusible link in a fire damper had let go, so our service tech was dispatched to the church with a replacement fire damper link in hand to avoid a return call to install the part. Sure enough, he found that an old fusible link had dropped and caused a fire damper shutter to close in the branch ductwork that fed the choir loft.

Don't think it was easy replacing the fusible link, because there was no fire damper access door in the ductwork. Our technician had to cut a hole in the sheet metal ductwork in the basement ceiling to access and replace the failed link, then repair the hole with a small piece of sheet metal. Cool air was once again blowing into the choir loft for all to enjoy, especially the music director.

INSIDE THIS ISSUE…

That same day, MSC tackled the elevated temperature problem on the left side of the church. We recommended selective air balancing to remedy the issue as opposed to a costly total re-balance of the entire structure. Our service tech made a few main volume damper adjustments to evenly distribute the air on both sides of the church. Now, parishioners would be comfortable again.

Once all of the HVAC mechanical issues at the church had been addressed, MSC examined how the HVAC system was being controlled. Temperature control issues had haunted the church for years, but various HVAC companies could…

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STEAM HAMMER & WATER CONDENSATE MANAGEMENT

Steam systems are frequently afflicted with water hammer, a condition that can cause serious damage to vents, traps, regulators and piping. Water hammer can be identified by the hammer-like noise it creates.

The most common type of water hammer is usually caused by an accumulation of condensate trapped in a portion of horizontal piping. Steam picks up this "slug" of water and hurls it into the nearest pipe fitting at a high velocity. The second type is caused by a steam bubble being pushed into a wet return line or pump discharge piping. When the bubble cools, it implodes with great force. Main culprits are improperly dripped mains and faulty steam traps.

Water hammer is often considered to be more of a nuisance than a problem, but left unchecked, it can cause serious issues within a steam system that result in costly repairs. MSC is expert in steam systems and can resolve water hammer issue before major damage can occur.

Church Air Flow Problems Solved

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…never identify the source. Our service technician, who is well-trained in both HVAC mechanical systems and HVAC/DDC controls, found that minimum damper positions in the multi-zone system had been improperly pre-programmed, and the appropriate adjustments were made.

Before field work began, MSC had a full-sized set of duct system drawings printed from digital plans provided by the church. These plans were given to the church at the end of the project at no extra charge – a big help to those who care for the building today and in the future.

In just one day of pre-planned field time, MSC made a positive impact on the building and the people who work and attend there every day. The church had needed rescuing, and MSC rescued them, because it's what we do. MSC is available 24/7/365 at 973-884-5000 for all your HVAC service emergencies, even for those who do not have an existing account.

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Tech Giants Use Recycled Wastewater to Cool Data Centers and Manufacturing Facilities

An immense volume of water is required to cool data centers and manufacturing facilities. Rather than tapping into local water supply, tech giants have found a way to slash water consumption at their facilities: recycled water.

In Prineville, Oregon, Apple paid for the construction and operation of a sewage treatment plant to cool their 338,000 data center, as well as second matching facility under construction and a third in the planning phase. The new plant will supply enough recycled water to provide 95% of their evaporative cooling needs. The new sewage treatment facility saves about 5 million gallons per year in Prineville by using gray water. In drought-stricken California, Apple partnered with Santa Clara Valley Water District to supply treated effluent for its new Apple Park headquarters.

Google uses treated wastewater to cool their data center in Douglas County, Georgia, and the NSA's massive data center at Fort Meade spent $40 million to build a pumping station to supply millions of gallons of local wastewater for their cooling system. In Nevada, the industrial park that houses Tesla's battery manufacturing facility and a Switch data center has reached an agreement with the nearby cities of Reno and Sparks to supply treated wastewater.

is Comprised of the Best-Trained, Best-Equipped Technicians in Our Industry.

As the leading diagnostics and service specialist in complex commercial and industrial HVAC, process cooling and building automation systems, it is supremely important that our techs are fluent across the board in the latest advances, techniques, and technologies to meet our clients' every need. This is achieved through:

- Continual technical training
- Monthly in-house collaborative workshops
- Vendor-hosted training seminars
- Industry guest speakers
- Substantial investment in the most advanced diagnostic tools available