

## SERVICE CALLS



**Critical Substation Cooling** - An electrical substation reported a 1200 CFM chilled water AHU that was blowing 90F recirculated air. Techs found the chilled water coil and controls plugged with silt and debris, and the backup ventilation fan damper bound shut. The damper was freed and the chilled water system blown down and flushed to get the substation's main and backup cooling systems running once again.



**VFD and Backup Cooling** - Cooling problem in walk-in boxes: condensers were served by a cooling tower, and drives for the tower water had shut down due to a voltage dip and failed to restart automatically. City water backup to the condensers also failed when the backup valve didn't open in time due to a programming error. Techs reprogrammed the drives to auto-start and corrected the backup system delay.

## Plan and Spec: Better Results Guaranteed with MSC

**When it comes to control systems, plan and specification projects, better known as plan-and-spec have a number of drawbacks** that complicate the process of choosing the best contractors. If you're not careful, the lowest bids are often the mostly costly in the long run.

Plan-and-spec drawings and specifications are oftentimes put together by a design engineer who was awarded the project based on a bid made competitive by budgeting fewer hours for design, resulting in specs that are not as detailed as they should be. In turn, BAS contractors, basing their bids on inadequate specs and drawings, may cut corners and use substitutions to provide their lowest possible price to decision makers who are often lacking in building automation knowledge. During the best and final offer phase, bids that are already rock bottom are often driven down even further. The result: 15-20% in change order cost increases, never-ending startups, high energy costs, and continual functional issues due to lack of thorough testing.



## INSIDE...

- [Plan and Spec: Better Results Guaranteed](#)
- [Service Calls / Plan and Spec: Photo Gallery](#)
- [HVAC Noise: Listen Now or Hear it Later](#)
- [Cooling Season / Did You Know](#)

*Continued on page 2*

# TECH TALK

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



NEWSLETTER - APRIL 2015

973-884-5000

## Plan & Spec: Better Results Guaranteed With MSC *cont.*

**Adding insult to injury, clients find themselves in a vicious cycle of frequent callbacks and high maintenance costs, locked in to a relationship with a control company they wish they'd never hired.**

In contrast to this all-too-common scenario, MSC recently completed a large BAS installation that included startup and testing as well as complete commissioning and performance testing. The new three-story, 375,000 sq. ft. client headquarters included a full mechanical basement with more than two thousand I/O points. Despite the fact that theirs was not the lowest bid, MSC's proposal offered the best overall value.

**Though designed as a plan-and-spec project, MSC approached it with a design-build mentality.** Having been heavily involved with maintenance at the original facility, MSC possessed in-depth knowledge of the existing equipment and controls, which was incorporated into the bid in terms of what could be saved, what could be improved upon, and how it should be implemented. MSC provided a specific outline of how the system would be installed and tested to support major milestones and assist third-party commissioning, as well as air and water balancing. As a result of thorough planning, there were no unnecessary or runaway project costs, and no finger-pointing or last-minute changes. In the end, superior planning and a unified team effort produced working, tested systems and a very satisfied customer.



### TECH TIDBIT...

- According to the D.O.E., HVAC accounts for 66% of all primary energy consumed in commercial buildings in the U.S. Facilities that practice regular preventive maintenance use up to 30% less energy than those with no PM in place.

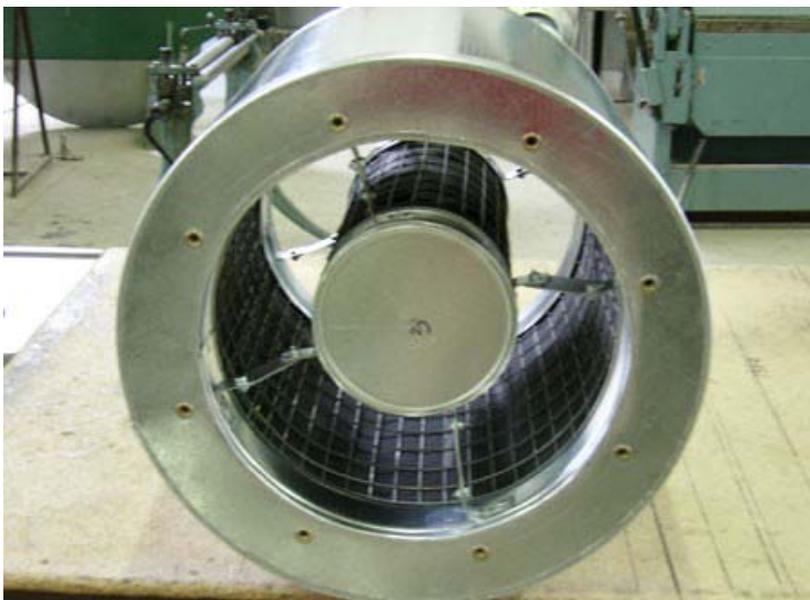
NEWSLETTER - APRIL 2015

973-884-5000

## HVAC Noise: Listen Now or Hear it Later

Noise control should always be a main consideration when designing an HVAC system, as it is always far more economical to curtail noise in the planning stages than to deal with it after the fact. This lesson was learned recently at a northern NJ facility that had neighbors and local officials in an uproar when they started up their large, excessively-loud new fans. Ultimately, it cost upwards of \$200K to correct an issue that could have been prevented with greater attention to detail at a fraction of the cost.

Noise can never be completely eradicated in HVAC systems, only minimized. The majority of post-installation noise issues we encounter are due to air velocity and fan noise. High-pitched air velocity problems are easier and far less costly to deal with than low-frequency rumbles produced by large motors, engines, pumps and duct turbulence.



Most local ordinances restrict noise to 50dB at the property line, and noise should be kept to tolerable levels for building occupants as well. Equipment manufacturers provide dB ratings for given distances to assist in system planning. If noise is expected to exceed acceptable levels, most manufacturers offer options such as generator housings and sound attenuators for air handling units and duct work. **It is always advisable to seek the assistance of a sound professional where noise control is particularly challenging.**

## Cooling Season Is Here

It's the time of year again to replace winter filters and clean evaporator coils, condensing coils, and drain pans. Cooling towers and tower water filtration systems should be cleaned and tested. Flush and blow out chilled water systems and clean strainers. The same goes for reheat hot water systems. Check for refrigerant leaks in all DX systems. This is the swing season, when we run cooling during the day and heat at night, so make sure your economizer cycles are programmed correctly. Lastly, make sure all systems operate to their design intent. This is the best way to conserve energy and extend equipment life.



### DID YOU KNOW...

- MSC has received an A rating from ISNetworld. ISNetworld is a global resource for connecting corporations with safe, reliable contractors in capital-intensive industries.