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AEROSEAL
Duct Sealing From The Inside

CASE STUDY

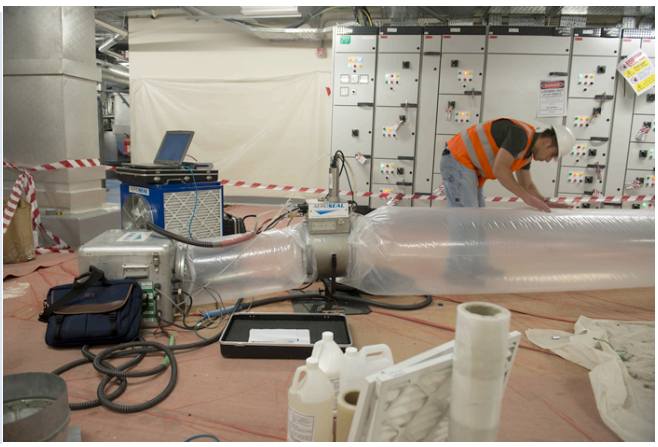
AEROSEAL SAVES AILING DUCT SYSTEM FOR NEW STATE-OF-THE-ART MEDICAL COMPLEX IN ABU DHABI

Word Of Innovative Duct Sealing Solution Reaches Around The Globe To United Arab Emirates As Building Engineers Face Daunting Energy-Robbing Duct Leakage Problem

The multi-billion dollar Arzanah medical complex in Abu Dhabi was nearing completion and stood ready to take its place as yet another shining example of the global leadership emanating from the United Arab Emirates. So it was with deep concern that engineers reviewed traverse readings taken from several of the structure's HVAC risers that indicated leaks were robbing the facilities of half of the air traveling through the ductwork. Not only was this unacceptable from a building code perspective, but it also created significant concerns regarding indoor air quality, building performance and energy costs.

In Brief

Building: Arzanah Medical Complex
Engineer: Habtoor Leighton Group
TAB Company: Trent Technical Services
Goal: Meet 8% leakage specifications
Before Aeroseal: Up to 50% or more of leakage
After Aeroseal: 5% or less leakage
Results: Eliminated duct leakage in a 127,000 CFM* system including all HVAC, exhaust and smoke extract systems. **Cubic feet per minute*



When the leakage was first discovered, walls of the two five-story building structures had already been constructed around the ductwork, making the leaks seemingly impossible to access without significant demolition. Engineers had even tried lowering workers down the risers to in an effort to find and manually seal the multitude of leaks but this proved to be hazardous and ineffective.

An Internet search for a better solution led the engineering team to Aeroseal – a duct sealing technology that works from the inside to seal leaks. After the technology passed rigorous safety criteria, an Aeroseal team was brought in from the U.S. to demonstrate the technology on several leaking risers. Test results were so impressive that the building engineers decided to use Aeroseal throughout the complex, including the HVAC exhaust, the HVAC supply, the HVAC return, the lab exhaust, the kitchen exhaust and the structure's entire smoke extract system – a 127,000 CFM system in all.

Work was completed in two weeks.

Quotes

"Aeroseal passed all of our criteria. First, it proved safe for use, even in a hospital environment. It then proved highly effective at sealing the system leaks. Aeroseal was so effective at eliminating leaks in the initial 15 risers targeted for sealing that we decided to expand the project to include the sealing of the building's entire HVAC system, lab exhaust system, kitchen exhaust system and smoke extract system – a 127,000 CFM project in total."

Gus Heber
Construction Director
Habtoor Leighton Group

"I thought the aeroseal technology was fantastic. I was expecting to find the entire inside of the ductwork coated with sealant. In fact, it just gathered around the holes to seal the leaks and left most of the internal ductwork free from sealant."

Kevin Waite
Test & Balancing Technician
Trent Technical Services

"We were so impressed with the results that we got from the initial Aeroseal work that we decided to increase the scope of the sealing work to include most of the remaining ductwork throughout the two-building structure. Now that we are familiar with the technology, we are looking at its use on a variety of other commercial building projects as well."

Ibrahim Kersley
MEP Manager
Habtoor Leighton Group

Aeroseal – The Technology

- Developed at Lawrence Berkeley National Laboratory in 1994.
- Research for Aeroseal was partially funded by the U.S. Department of Energy.
- Aeroseal is the only duct sealant technology that is applied from the inside of the duct system. It is delivered as a non-toxic aerosol mist that seeks out and plugs leaks.
- Aeroseal has proven to be 95% effective at sealing air duct leaks.

For more information on the Arzanah Medical Complex duct sealing project or about Aeroseal in general, contact Aeroseal at (937) 428-9300. You can also visit the Aeroseal website at www.aeroseal.com.

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