

≡ **CASE STUDY** ≡

**UNIVERSITY OF OTTAWA HEART INSTITUTE USES AEROSEAL  
TO SOLVE AIR LEAK MYSTERY / IMPROVE VENTILATION**

**Used To Seal Hospital's Stainless Steel Duct Work, Breakthrough Duct Sealing  
Technology Reduces Ventilation Leakage From 800 CFM to 10 CFM**

UOHI turned to new duct sealing technology to solve one problem and wound up solving two. Hospital monitors detected that an isotope created in one of the institute's laboratories had somehow migrated to an adjacent wing of the building. By using aroeseal technology to seal possible leaks in one of the ventilation shafts, the hospital could ensure that the isotope wasn't spreading from one shaft to the other. Once the shaft was aroesealed, the hospital immediately noticed another significant benefit – dramatically improved ventilation efficiency and lower energy costs.

**In Brief**

**Building:** University of Ottawa Heart Institute  
**Engineer:** GENIVAR | Constructive People  
**Duct Specialists:** AWS Technologies  
**Goal:** Eliminate duct leakage as cause of building-to-building air contamination  
**Before Aroeseal:** Up to 800 CFM\* of leakage  
**After Aroeseal:** 10 CFM of leakage  
**Results:** Virtually eliminated ventilation leakage. Improved system efficiency. Reduced utility costs.



There was only one way to ensure the migrating isotope wasn't being spread through leaks in the ventilation system – and that was to seal those leaks. Using traditional duct sealing methods would have been extremely disruptive and expensive. Entire wings would have had to been shut down as workers tore down walls to access the ductwork. Fortunately, the hospital's duct specialists, AWS Remediation Technologies, had heard about Aroeseal, a breakthrough technology that works from inside the duct system. With Aroeseal, the actual sealing process took less than a day. Regular hospital operations continued uninterrupted.

With the vents sealed, UOHI's engineers were able to locate the problem – laboratory equipment leakage. They also discovered an unintended benefit of the duct sealing. The institute's ventilation system – which was previously running at full capacity – could be turned down while maintaining better ventilation. Air quality was improved. Energy usage was reduced. The hospital is now planning to use Aroeseal on other ductwork throughout the institute.

## Quotes

“If duct leakage was the problem, we were facing the possibility of having to actually replace the hospital’s entire duct system – then we heard about AeroSeal. After conducting extensive research on the technology, our health and safety officer approved its use. It then took AeroSeal less than a day to effectively seal one of the hospital’s ventilation shafts. The positive impact that aeroSealing the shaft had on system performance was clear and immediate. We are now looking at using AeroSeal elsewhere throughout the hospital to improve the efficiency of our ventilation system.

*Michele Emond, project manager, University of Ottawa Heart Institute*

“A lot of us were surprised to see that even arc-welded stainless steel ductwork is susceptible to significant leakage. Luckily, AeroSeal offered a safe and unobtrusive way to seal the entire ventilation shaft – without disrupting regular hospital operations.

*Cory MacDonald, duct specialist, AWS Remediation Technologies*

“We understand that in a medical environment, concerns over the health of workers and patients is paramount. We also know that expensive and sensitive equipment cannot in any way be affected by the duct sealing process. Now that AeroSeal has been employed at a growing list of prestigious health care facilities, its safe use in even the most sensitive facilities is being proven every day.”

*Robert Seals, AeroSeal LLC*

## 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 University of Ottawa Heart Institute’s 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](http://www.aeroseal.com).

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