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Got Mold?

Don't Tear the Building Apart

Heat treatment can destroy the mold problem while minimizing reconstruction costs.

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Water damage and mold growth can occur in any structure. The many modern conveniences we have in our homes and offices can easily turn on us resulting in water damage and mold growth.

As building owners learn more about the dangers of mold exposure and the damage it can cause to structures, they have a greater desire to protect the health of their occupants and their investment. The problem with traditional mold removal is that it can come with costly reconstruction expenses. Removing mold often means removing significant amounts of walls, floors and other architectural components.

As the mold remediation and water restoration industries have grown over the years, contractors are being forced to find unique solutions to reduce costs and remain competitive. The ThermaPure heat process provides such a solution. It has been successfully used as an alternative to costly demolition-based remediation and has saved numerous property-owners many thousands of dollars since it was first introduced as a viable option in mold remediation projects.



The ThermaPure process uses heated air to create a dry, sauna-like environment in the structure. Heat has shown to be effective in killing mold, bacteria, viruses, insects, and other biological organisms, even in inaccessible areas, without the use of chemicals. Heat also speeds the off-gassing of formaldehyde, Volatile Organic Compounds (VOCs) and odors, and thoroughly dries the structure. The end result of the ThermaPure process is typically a cleaner, drier and healthier structure.

Recently, a high-profile downtown Los Angeles mixed-use complex was plagued with a costly mold problem on the interior of an architectural water feature. A small leak inside the water feature had occurred and was not detected until a significant portion of the base of the structure was impacted. The portion of the water feature acting as both firewall and pipe chase had been thoroughly saturated accompanied by mold growth on the interior paper of the drywall located near the base of the wall. Because it was both firewall and pipe chase it was a complex structure that had multiple cavities with drywall in three different locations two to three layers deep. Fortunately, no structural damage had occurred, but access to the interior of the water feature was difficult and costly. The owner preferred that there was minimal damage to the expensive exterior concrete finish and asked if it could be salvaged rather than destroyed to access the drywall below.

The client was faced with a problem not all too uncommon in the mold remediation business. Traditional methods as recommended by the environmental consultant's first remediation specification would have required extensive demolition and reconstruction costs. Additionally, the remediation might have required the shutdown of the portion of the building with the water feature for the length of the project.

Faced with the dilemma of minimizing the costs of remediation for their client, DKI Restotech of Long Beach, CA looked for an innovative solution and decided to take advantage of the heat treatment process. They needed to present the client with a unique approach, and offered ThermaPure as the

perfect solution for achieving clearance requirements while reducing overall remediation and reconstruction costs.

The owner of the complex reviewed the DKI Restotech proposed process with their environmental consultant and subsequently ThermaPure was written into the specification as an alternative to the previous mold remediation recommendations. The owner's objective was to seek the least costly solution that minimized demolition and reconstruction of the water feature and disruption to the property. However, he also understood the need to deal with the existing mold growth and potential damage to the water feature and limit future growth colonization opportunities.

Precision Environmental, Inc. of Ventura, CA, a ThermaPure licensee, was brought in to heat the contaminated drywall. "We completed the project in a third of the time necessary for traditional remediation and at the same time save the client thousands of dollars in reconstruction costs," said Jon Nelson, General Manager of Precision Environmental, Inc.

The water feature firewall had five small openings to introduce the heated air and create the required air convection. Additionally, the wall was enclosed and heated from the exterior. The containment was maintained under negative pressure and convection was used both inside and outside the wall to distribute heat. Multiple temperature sensors were used to determine if the structure was heating uniformly. HEPA filtration equipment was utilized to remove the aerosolized mold spores generated by the process.

The target temperature of 150 F was attained through the use of a combination of equipment. First, desiccant-drying equipment was used to dry and slowly raise the temperature of the wall. Direct-fired propane heaters were then used to increase the temperatures and convective airflows to complete the drying and reach the lethal temperatures for the mold colonies.



The environmental consultant conducted a thorough post remediation inspection of the project area which included moisture readings, a visual inspection for microbial growth and staining, and a series of swab samples that were cultured and analyzed for viability. Each of the six swab samples taken and cultured did not detect any live mold. The consultant determined that the remediation was successful.

DKI Restotech and Precision Environmental were able to save the client \$10,000 in remediation costs and tens of thousands more in reconstruction costs. Disruption to the normal building operation was minimal as the project took significantly less time to achieve the project objectives.

Using heat allows clients to avoid many of the costs associated with traditional remediation methodologies. Heat allows contractors to reduce demolition costs - and in some cases altogether forgo it - while destroying active mold growth and thoroughly drying the structure. Because heat uses no chemicals, there is no threat to human health from possible exposure to biocides and other harmful toxins applied by some contracting firms.

David Hedman, the inventor and patent holder of ThermaPure, recommends that the process be used in conjunction with gross mold removal when access is readily available and water damage or structural concerns exist. However, Mr. Hedman says the ultimate decision on use of the technology is up to the qualified environmental consultant or certified industrial hygienist. He may specify the technology to best meet the client's needs and use the process as an additional tool to provide the best management practice for mold remediation projects.

Mold and moisture problems can happen to anyone. Water intrusions can occur in any building regardless of its location. When you are faced with mold remediation or a water intrusion problem it doesn't have to be as expensive or as dangerous as it used to be. ThermaPure has been proven to be an effective tool in destroying active growth sites, thoroughly drying wet structures and preventing costly demolition used in traditional remediation projects.

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