AIR MANAGEMENT TECHNOLOGIES, INC.
Building Energy & Environmental Services
1776 Industrial Blvd. ▪ Lewisburg, PA 17837
Phone 570-523-4822 ▪ Fax 570-523-2048
www.airmanagement.com

Call us today at
1-877-PICK-AMT

Commercial/Industrial Bakeries **Volume 1, July-August 2011**

In This Issue

- **Spiral Cooling Systems**
- **Phase Change Materials**

Link Category Title

National Allergy Bureau
United States Mold Level Counts.
http://www.aaaai.org/global/nab-pollen-counts.aspx

Contact Us

http://www.airmanagement.com

scott.houtz@airmanagement.com

Unsubscribe by e-mailing the above address with unsubscribe in the subject line.

Services:

- ***Industrial Refrigeration & HVAC***
- ***Oven/Oxidizer Heat Recovery***
- ***Spiral Cooling Systems***
- ***Mixer Refrigeration***
- ***Industrial Ventilation***
- ***Building Automation Systems***
- ***Submetering Gas & Electric***
- ***Boiler Systems***
- ***Mechanical Insulation***
- ***Energy Management***
- ***Waste Heat Management***
- ***Microturbines***
- ***Dehumidification***
- ***Fermentation Environmental Control***

Spiral Cooling Systems

Spiral Cooling Environmental Systems as designed by Air Management provide many important product quality benefits including a key benefit in reducing exposure to atmospheric molds. In colder climates, molds can be found in the outdoor air starting in the late winter and peaking in the late summer to early fall months (July to October). In warmer climates, mold spores may be found throughout the year with the highest levels found in the late summer to early fall months. This natural event unfortunately can at times be linked to increased consumer mold complaints as these particulates enter the plant and deposit on products.

Our company has been designing Spiral Cooling Systems since 1999 and has a proprietary design that can operate at less than half the energy consumption and tonnage of competitive systems depending on the geographic location. Several advantages include consistent product temperatures regardless of plant conditions, flexible operation for various products, air filtration, sanitation benefits, reducing mold exposure and other particulates, indirect humidity control, as well as decreased plant heat load and pressurization requirements.

Phase Change Materials

Some people may be asking what Phase Change Materials (PCM's) are, and what does it have to do with my bakery? PCM's are used for storing thermal energy and you might want to compare them to the "ice packs" at home in your freezer. These materials hold significant amounts of thermal energy in a small space (latent heat) and then release this energy as needed at higher temperatures.

Ice water and mixer refrigeration systems in bakeries can benefit in many cases from PCM's, since by design these systems experience variable loads (on-off) with mixers cycling and ice water batching numerous times each hour, and systems that are normally sized to handle peak demands. PCM's can help level out capacity fluctuations and in cases where existing systems suffer from capacity shortfalls during certain peak time periods such as when operating a liquid sponge heat exchanger etc. can actually store energy over time and provide the reserve capacity as needed. Other benefits include energy savings by reducing electrical peak demand and enhancing chiller operation by allowing longer run times that will increase efficiency and operation.