JULY
2012

Kelley HVLS Fans
Help Old Town Canoe Company Go with the Flow

Company:
Old Town Canoe Company

Challenge:
Keeping employees warm and comfortable during the long, cold Maine winters.

Solution:
Kelley® FUSION™ HVLS Fans

Industry:
Manufacturing

Geography:
Old Town, ME

"A lot of heat was being trapped in the ceiling. We were basically burning up a whole lot of fuel to heat the ceiling."

- Eric Schmidt, Engineering Manager for Old Town Canoe

Well into its second century of making canoes and other paddle craft, the Old Town Canoe Company has become the standard among outdoor enthusiasts with nearly 110 years of innovation.

Back when it was founded in 1902 in Old Town, a city carved out of the Maine forest by the lumber industry, there were fifteen other canoe factories in the area. None of these other companies are in existence today and now Old Town dominates the market, selling canoes, kayaks and accessories worldwide.

Several years ago Old Town moved out its century-old multistory building downtown along the Penobscot River and into a new 136,000 square foot production facility just north of the city.

Heating this large facility during the long Maine winters can be costly. From November through March, the area's average low temperature is well below freezing, causing the HVAC system to work overtime to keep employees warm and comfortable. Two Kelley FUSION HVLS fans enable the company to take advantage of the heat generated by its HVAC system and other sources to keep the facility warm, employees comfortable and production steady.

Chris Seavey, with Dock and Handling Systems, based in Portland, Maine has been Old Town's longtime source for dock and warehouse equipment. He knows the challenge of keeping

the loading dock warm in winter. "Since Old Town moved into the new building," according to Chris, "they have had trouble keeping a consistent temperature on the loading docks during the winter months."

Eric Schmidt, Engineering Manager for Old Town, described another problem associated with maintaining temperatures. "A lot of heat was being trapped in the ceiling. The temperature in the mezzanine was 85 degrees. We were basically burning up a whole lot of fuel to heat the ceiling."

The mezzanine and ceiling areas weren't the only places experiencing unequal heat distribution. The factory has a break area near a line of giant natural gas fired ovens, in which aluminum boat molds filled with plastic powder are rotated evenly to create the sleek hulls of molded canoes and kayaks.

Until the installation of the fans, this area also represented wasted heat. Much of the heat captured in the ceiling came off the boat ovens. While

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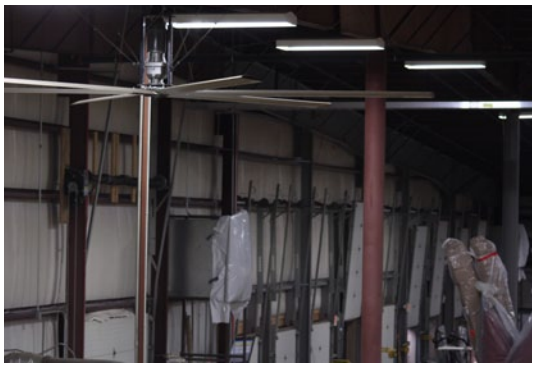
the thermometer in the ceiling hit 85 degrees because of heat radiated from the ovens, the floor in the break area could be an uninviting 60 degrees.

During a trip to Old Town Canoe to look at their 15 door loading dock, Seavey suggested the addition of Kelley FUSION HVLS fans to Schmidt when the topic of fighting drafts and restoring heat balance came up in the conversation. "Chris said to me that the fans could balance out our heating and cooling load," recalls Schmidt. "The idea made sense, so we brought in one as a pilot for the loading dock area. The results were evident right away and Old Town quickly installed a second one over the break area. " he added.

Overhead in the loading dock break area, the six-blade FUSION fan circulates the air to ensure that it stays warm and creates a productive place to work or to relax.

The Kelley HVLS fan produces a large column of air that flows down toward the floor and then outward in all directions, creating a "horizontal floor jet" that circulates air vertically up the walls and then draws it back to the central column, where it again flows toward the floor. This performance is optimized by the fan's unique design and its lightweight extruded aluminum blades.

The facility enjoys both comfortable, productive employees and lower energy costs as a result of installing the fans. The heater is activated by a sensor, and thanks to the fans, it runs less often. "The employees used to complain about the cold," says



Schmidt, "but since the fans went in they talk about how much better they feel."

The fans actually provide comfort year round. "We have ventilation over the ovens to remove heat in summer," points out Schmidt. "Over at the dock, employees will open up the doors, turn on the fans and enjoy the pleasant breeze in the summer. The fans also eliminate stagnant air."

Schmidt adds, "In winter we run the fan at a slower speed, around 30% power and in summer we turn them up to 70% to get more evaporation on the skin. Still, papers do not blow around to cause disruption. The fans basically get the temperature right."

The fans get Old Town's heating budget right as well. According the Schmidt, the heater used to run 24/7 during the winter, now it sometimes shuts down for periods of time and the employees don't even notice.

Schmidt estimates that the fans they have now have dropped their heating costs by roughly 15%; additional fans are projected to reduce heating costs by 20%. "The fans," says Schmidt, "will definitely pay back in the first year."

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