

Campbell's

Putting the Skids on Slippery

CHALLENGE

The manufacturing environment demands stringent controls for safety, air quality, temperature and cleanliness so that the work is performed within the parameters that guarantee top performance. Campbell Soup Company, one of the largest food companies in the world with products in 120 countries, operates a cooler/freezer storage unit 24 hours/day alongside a 8'x16' heavily trafficked forklift entrance with a fast-acting vertical-lift fabric door. Known as Food Processing Magazine's 2014 Green Plant of the Year, this Campbell's facility is a sprawling, 2.4 million-sq.-ft. complex on a 949-acre parcel that hugs the Maumee River in Ohio. The operations crank out 107 million cases of soups, juices, beverages and sauces each year. The hot, humid warehouse conditions collide with the cold, dry-storage area air which produces condensation and pools of water at the base of the freezer -- both inside and out. Pooled water also flowed from the freezer opening directly into the walkways that hosted both foot and forklift traffic.

THE SOLUTION

The Mars engineering team isolated the precise area that needed an air burst to eliminate condensation then installed a bundle of door-activated, vertically-mounted and stacked air curtains and air diffusers* right at the cold storage unit's forklift entrance. The air curtain's forced-air action stabilized cold area temperatures by creating an air seal which effectively evaporating most surface condensation. The Mars solution also eliminated walkway water. After effectively removing the center's concerns, the Mars team went further and helped the facilities management team find solutions to condensation inside the freezer unit by recommending the operation of the air curtains with a closed door during low traffic conditions and using insulated material at the side walls.

*Mars air curtain models STD248 and STD272 and air diffusers models 10-592-48 and 10-592-72



atmosphere is everything

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STUDIES REVEAL A 6%-9% UPSIDE EFFECT ON WORK PERFORMANCE BASED ON IMPROVED AIR QUALITY AND TEMPERATURE. (WYON 2004)



PRODUCING NON-TRADITIONAL SOLUTIONS

For high-value product manufacturers, controlling the manufacturing environment and atmosphere within a narrow degree of variability means saving tens of thousands of dollars eliminating defects. Both Subaru of America and a BMW-contractor, TW Fitting NA, LLC, used the Mars Air Systems air curtain to deliver a superior non-traditional solution for their manufacturing challenges. The Mars Engineering team's solution helped prep the tires TW Fitting NA prepares for BMW vehicles by simply suspending nine electrically-heated air curtains over the tire conveyor belt. The solution enabled the tires to be heated just enough to create a more pliable rubber and eliminate the splitting, beading and rim damage which occurred when the rubber was colder. The Mars solution then did its part to lower energy costs by eliminating the need for an energy-gulping and unwieldy liquid-propane solution. Similarly, when Subaru needed near-pristine atmospheric conditions for their paint booths, five separate Mars air curtains were installed in the hallway paint room entryway to act as an "air shower" for workers. Using the sequence of units, the Mars team was able to virtually eliminate dust and hair from the worker's clothing so particles could no longer mar the painted finish.



KEEPING IT FRESH ENOUGH FOR A BABY'S BOTTOM

As P&G's third largest diaper plant in the world, responsible for exporting 60 percent of its production to Europe, Asia and the Mid-East, this Cairo-based plant often leads as one of Egypt's top American business success stories. Set in an area known for legendary dust storms that transfer accumulated debris from the far reaches of the Saharan Desert, on any typical day air quality measurements routinely record dangerously high levels of suspended particulate matter. Mars Air Systems to the rescue. With the installation of over 100 Mars air curtain units in a plant hosting over 1200 workers, the result was an effective embargo on bad air and dust from blowing in doorways and entryways. Deploying the Mars comprehensive facilities-wide approach to controlling both loading dock entries and doorways with a directed stream of air, facility managers were assured that unpredictable climatic conditions would be forced to surrender to the power of the Mars air curtain and their invisible shield of protection.



MANAGING WIDE OPEN SPACES

Large cavernous manufacturing centers grapple with complexities — voluminous staff, high traffic, inconsistent climate control, and ongoing pressure to create productive working environments so output goals are hit month after month. In the Campbell Soup Company's sprawling, 2.4 million-sq.-ft. facility, a collection of exterior doors continually introduce outside air to the workspace. Facility managers were using propeller-based fans in an ill-working attempt to barricade the unwanted airflow they blamed for drafts and shrinking productivity. The fans were doubly ineffective because they relied on excessively high horsepower to produce a wide projection of diffused air. The fans were spreading an unfocused blast of air using an excessive amount of energy. The Mars Air Systems air curtain solution was able to produce a precision air barrier with a concentrated blast of air that used only 3 HP versus the fan's excessive 15 hp. Better still, the Mars solution consumes the energy equivalency of one standard metal parking light with a 1500-watt metal halide bulb turned on for one hour and completely eliminated the view obstruction of the fans.



TOO MANY PEOPLE NEED US — IT HAS TO BE RIGHT

When you're as successful as Westmoreland County Food Bank because you serve 7,200 families a month and operate a 40,000 sq.ft. facility that processes 8.6 million pounds of food a year, your food storage equipment needs to work flawlessly. For Westmoreland, facility limitations forced the freezer and evaporator to sit side-by-side which led to a healthy dose of humidity leading to ice and frost on the floor outside the freezer doorway — a safety hazard for both forklifts and workers on foot. When it's too important or costly to be anything other than right, Mars Air Systems is the team you want on your side. Mars has been repeatedly the source for answers when large industrial and foodservice operators need no-fail solutions to vexing humidity, unwanted condensation or accident-provoking pools of water. Deploying air baffles to ride shotgun along side the series of air curtains gave the Westmoreland workers the means to ward off the flowing water that had been a source of slippage, falls and worker injury.



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