

Outstanding Benefits

Lead Furniture Manufacturer to UV



By Bill Sparks

HNI Corporation is the second largest office furniture manufacturer in the United States. In 2003, Fortune Magazine selected HNI Corporation (then known as HON Industries) as the most admired company in the furniture industry. HNI Corporation, which dates back to World War II, has risen to the top in the

of natural resources to ensure the well being of all of their stockholders, employees, suppliers, customers and finally the communities in which they have operations.

Some of the key points of this document include the elimination of waste critical to the environment, recognition of potential environmental hazards and the use of products that were specifically designed to have a minimal environmental impact. HNI Corporation has made a concerted effort to modify their manufacturing processes to minimize the effect on air and water quality. The implementation of UV-curing technology in the finishing process at Gunlocke, one of HNI's subsidiaries, has been an integral part of HNI Corporation's commitment to improving the environment while manufacturing superior office furniture.

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office furniture industry because of its commitment to unique design, superior production, excellent craftsmanship and customer service.

Commitment to the Environment

In March 1990, HNI Corporation established its Corporate Pollution and Waste Elimination Standard Practice Instruction. This document defined management's commitment to environmental excellence. The goals of the company reached far beyond mere legal compliance. They included a commitment to proactive stewardship

The Manufacturing Process

Gunlocke currently uses UV for table, desk and credenza tops. Cherry, oak and walnut veneers are primarily used in a fully automated process. The first step is the sealer, which is applied with a roll coater. There are four roll coaters with UV lamp(s) stationed after each coater. The topcoat is sprayed on with a robotic sprayer and then cured with five UV lamps.



Conference room furniture made at Gunlocke using UV-curing technology in the finishing process.

Realizing the Benefits of UV

In addition to the environmental advantages Gunlocke was looking for in producing its office furniture, UV-curable coatings also provided the company with other outstanding benefits.

According to Rajamani Nagarajan, Ph.D., senior scientist for HNI Corporation, the abrasion resistance is unparalleled. Comparing its former traditional coating to Akzo Nobel's UV-curable coating, the UV coating clearly outperformed the solvent-based coating. Testing was completed using the Tabor Abrasion resistance tester with a CS 17 wheel and a 1,000g load. The UV-curable coating passed 3,400 cycles while the solvent coating performed to 850!

Another great advantage of using UV-finishing technology was the speed at which Gunlocke has been able to

manufacture its products. Dave Gardner, vice president for Gunlocke operations says, "Before moving to UV, we had to wait six hours before the final product could be packed into cartons to let the solvents flash off completely. This had a negative impact on both production speed and inventory. Now the finished product can be packed immediately after it comes off the finish line, which means reduced floor space requirement and zero finished product inventory." In fact, the process is so fast that Gunlocke cannot disclose the speed at which the parts travel.

UV-curing technology has also had a profound impact on worker safety. "The use of automated coating equipment has helped to improve (worker) safety and the use of VOC free coatings mean that they are no longer exposed to solvents, which is a

good thing," says Pete Hagmire, Gunlocke's support services manager.

So, what about the appearance of Gunlocke's products? According to Gardner, customer feedback has been very positive. "If there were a beauty contest conducted for furniture, our products would win by a huge margin."

Summary

HNI Corporation's commitment to environmental excellence led the company to UV-curing technology, but along the way HNI realized the many other advantages of using UV such as abrasion resistance, higher efficiency and production, and quality appearance. ▸

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