

Best Practices SUSTAINABILITY

Innovative Advances in Sustainability: **ASHLEY FURNITURE INDUSTRIES, INC.**

BACKGROUND

Ashley Furniture has principle offices, manufacturing, and distribution in Arcadia, Wisconsin. The early establishment of Ashley dates back to 1945. In 1970, the Arcadia, Wisconsin factory opened, specializing in occasional tables and wall systems. The building encompassed 35,000 square feet of space and 35 employees. Under the vision, direction and leadership of Ron Wanek, Ashley has become a "World-Class Furniture Manufacturer."

With over 60 years of innovation and experience in the furniture industry, Ashley Furniture has become an industry leader as the largest manufacturer of quality home furnishings. Ashley employs 3,500 people in Arcadia, WI and a total of 9,000 people in the U.S.

Today, Ashley has over 7 million square feet of facilities spread over six different locations and manufactures all major style categories. Ashley Furniture searches the world for the best values and designs in home furnishings and accessories. Ashley manufactures its own products in the United States, and also purchases components and products from other countries.

Todd Wanek, President & CEO of Ashley Furniture says: "Our company is very focused on sustainability and green projects. We are actively involved in recycling, and utilize recycled materials in our manufacturing processes and finished products. We integrate manufacturing and delivery with unsurpassed customer service to ensure that consumers receive the greatest level of benefit from the use of our products with minimal impact on our environment."

"We encourage everyone in our company to be aware of the environment, and to share their ideas on improvements that will make Ashley a better steward of the environment."

Todd Wanek
President & CEO



Location: Arcadia, Wisconsin
Industry: Furniture Manufacturer
Size: 3,500 employees in Arcadia, Wisconsin; 9,000 total nationwide

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PRODUCTS

Ashley manufactures an entire line of home furnishings and has refined the materials and processes to reach an unparalleled level of quality and consistency. One of their major corporate goals is to continue to refine products and materials to reduce the impact on the environment. Ashley uses solid wood materials throughout its product lines, but realized years ago the benefits of Engineered wood. This innovation can primarily be found at the core of much of their furniture and is accepted throughout Europe as a world-class product. The sidebar describes the components that go into making this one of the most environmentally friendly materials available to the

furniture industry including:

- Wood residuals form the core of the panels.
- Adhesives used to make the panels achieve stringent formaldehyde emissions standards.
- Paint finishes are almost completely water based, eliminating VOC's.
- Ashley is constantly seeking ways to maximize material usage and reuse products where possible.

PRODUCTION

In the machine shop, Ashley has initiated an innovative program termed "Lights Out". Two CNC machines, which produce drill and router bits used in the production of panel components, are operated automatically in off hours including the weekend, cutting significant high demand time operation.

What does SUSTAINABILITY mean to businesses?

The most commonly used definition of Sustainability incorporates the precept of *"meeting the needs of the present without compromising the ability of future generations to meet their own needs."* Now this is a pretty far reaching statement and is not particularly helpful to businesses driven by production goals, quality improvement, increased efficiency and cost cutting. As we talk to those business leaders already engaged in sustainability efforts, the terms they tell us include:

- (1) consider the entire life cycle of the product and of physical assets;
- (2) consider the effect on the community infrastructure;
- (3) environmental solutions must have a business purpose and bring value to the business;
- (4) you must have passion for it and enable staff to be innovative.

We've found that sustainability is a very broad subject incorporating product design, procurement, production, packaging, logistics, facilities design and operation, safety, health, leadership, employee involvement and community support. We've also learned that while companies exhibiting best practices may not hit every one of those marks, they get pretty close. So choose a definition that best suits your business, but know that the companies we've talked with are successful partly because of their passion for sustainability, not in spite of it.

FACILITIES

Ashley Furniture has taken a three-pronged approach toward energy reduction through conservation, application of new technologies, and exploitation of free energy sources. Examples of these efforts are:

- Lighting retrofit of manufacturing plants using computerized light simulations to produce a plan that eliminates inefficient HID and T12 fluorescent lights and replaces them with the latest technology T5 and T8 HO fluorescent fixtures. These fixtures produce a more consistent and better quality light at less than half the power consumption. This is coupled with daylight harvesting controls that shut down lights when daylight through skylights is sufficient, painting the building interiors with a highly reflective white paint, and the addition of occupancy sensors that turn off lights when the building is unoccupied. All of the examples were able to be utilized, while still maintaining the minimum light required per ASHRAE/IESNA standards for each given area, therefore not compromising safety. TPO Roofing retrofit of manufacturing plants, adding insulation R value, provides a reflective white surface on the roof exterior to reduce radiant heat, and allows the addition of solar light tubes where previously impossible. The addition of solar light tubes, or skylights, provides the ability to shut down all lighting anywhere from 25-40 percent of the day, depending on the location.
- Use of intuitive machine controls that monitor conditions and control motors with variable frequency drives to varying supply demand for vacuum, compressed air and dust collection.
- Operate a biomass fueled boiler to supply heat to the Arcadia campus, coupled with capturing residual heat from production equipment to reduce consumption of natural gas



Engineered Wood • A World Wide Accepted Sustainability Product:

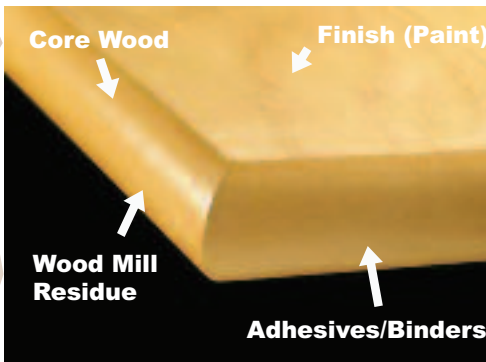
The core of Ashley's furniture products is Engineered Wood. These products, manufactured from cellulose fibers and synthetic resin, are extremely stable, millable, durable and take overlays and paint finishes very well. By using engineered wood, Ashley is able to utilize 95 percent of the tree in its manufacturing processes. Solid lumber uses only 63 percent of a tree. This aids in the preservation of natural habitats and reduces landfill waste.

Core Wood

- Consists of wood mill residuals
- Form large panels from small trees
- Use wood with defects
- 95% of a tree can be used verses only 63% for dimensional/solid lumber

Wood byproducts from Production

- Cut offs and saw dust from Ashley production is burned in an on-site boiler and provides 65% of the winter heating needs
- In summer, residuals are shredded and sold as animal bedding
- Efficient reuse of wood byproducts enhances Ashley's carbon footprint



Finish (Paint)

- Primarily water-based
- Eliminates VOC's
- Non-pollutant to waste stream
- Safer work environment
- Easy clean-up without solvents
- Low odors

Adhesives/Binders

- Over 99% Formaldehyde free
- Meets strict formaldehyde emission standards
- 90% water-based adhesive

Attributes of Engineered Wood

- Flat, smooth, uniform and dense
- Free of knots and grain pattern
- Allows intricate and precise machining
- Resists warping, cracking and splitting
- Properties can be altered for different applications

Engineered Wood

Engineered wood, also called composite wood or man-made wood, includes a range of derivative wood products which are manufactured by binding together the strands, particles, fibers, or veneers, together with adhesives, to form composite materials. These products are engineered to precise design specifications, which are tested to meet national or international standards.

Typically, engineered wood products are made from the same hardwoods and softwoods used to manufacture lumber. Sawmill residuals and other wood byproducts can be used for engineered wood composed of wood particles or fibers, but whole logs

are usually used for veneers, such as plywood and oriented strand board.

Decorative Surfaces

Decorative surfaces can be broadly separated into two groups – overlays and coatings – and are applied by various techniques to panel products. Overlays include products such

as foils, high-pressure laminates, papers, thermal fused melamine, veneers and vinyl. Coatings used as industrial decorative surfaces on composite wood substrates are available in both liquid and powder forms.

used for heating. Wood byproducts from panel milling and cutting are used in the boiler to provide about 65 percent of the heating needs in the winter.

- The lighting reduction initiatives, alone, project an equivalent annual savings of over 13,000 barrels of oil.

- Employees provide energy saving ideas through an idea network. Savings are shared with employees and prizes are awarded for the best ideas.

LOGISTICS

Ashley operates the largest air-ride truck fleet in the industry and is evident on highways in Wisconsin and across the country. Tractors are equipped with auxiliary power units (APU's) which minimize idling and decrease fuel consumption by 10 percent. Bio-diesel fuel is used when available.

Aerodynamic cab design, aluminum wheels, fairing systems and lightweight trailer components lighten vehicles to reduce fuel consumption and emissions. Hauling efficiencies are increased through the use of the largest dock heights vans available. Ashley is also experimenting with running time schedules to optimize fuel efficiency. Where possible, materials are sourced locally to reduce transportation costs and minimize storage needs.

RECYCLING/PACKAGING

Ashley endeavors to reduce Styrofoam and other non-recyclable packaging materials where possible. They direct their suppliers to eliminate or reduce packaging of incoming materials. Ironically, finished furniture is packaged using cardboard boxes and protective materials to ensure a safe delivery, and as a platform to accommodate governmental required product labels.

THE COMMUNITY

Trees and Parks

Each year, Ashley Furniture actively assists the city of Arcadia and surrounding communities, including local schools and non-profit organizations. This includes the allocation of time, resources and



funds toward various community projects. Ashley distributes more than 25,000 trees in observance of Arbor Day, maintains more than 1,000 trees and shrubs on their Arcadia Campus and has donated more than 600 trees to the city of Arcadia. Ashley's chairman, Ron Wanek, is the lead benefactor and designer of Soldier's Walk in Arcadia's 54 acre Memorial Park. He also sculpted many of the bronze monuments displayed throughout the walk to honor those leaders and veterans who fought to give us the life and freedom we enjoy every day. Soldiers Walk is widely recognized by its visitors as the premier United States war memorial outside of Washington, D.C. It also features the Millennium Amphitheater, one of the finest in the country with seating for two thousand spectators and an additional two thousand around the rim. To date, Ashley Furniture's contributions to the park are valued at more than \$5 million. This does not include the involvement of Ashley employees who have volunteered hundreds of hours in developing and maintaining the walk.

MORE INFORMATION

For more information on WMC's Sustainability efforts, contact Mike Shoys, mshoys@wmc.org, (608) 258-3400.

REFERENCES

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