

Foamed Recyclables



New Process Allows Coal Ash to be Made into Building Material Products

With a grant from DOE's Inventions and Innovation Program, Century-Board USA, a licensee of Ecomat, Inc., has a fully developed process to convert solid wastes into synthetic building materials.

The process consists of mixing up to 85% solid waste into a modified polyester polyurethane resin with special additives. This polymer system is a thick liquid that is poured into discrete molds or continuously cast, as is done with the 'plastic' lumber. This thick liquid then forms and fills all the crevices of the mold and produces a lightweight, hard, and tough product. The material does not contain thermoplastics such as polyethylene or PVC, wood or sawdust unless requested by the customer.

Benefits

Productivity and Profitability

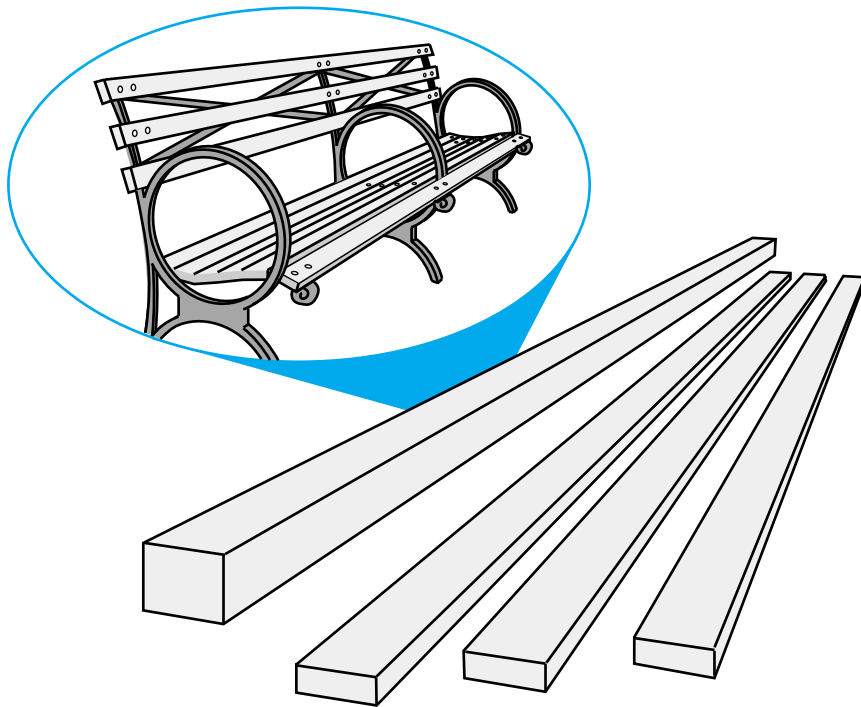
Below the cost of many competitive materials and can be reground and reused in the same process. It is lightweight and can be 1/10th the density of concrete.

Product Quality

Their synthetic building material products are maintenance-free, fire and weather resistant, lightweight and tough.

Waste Reduction

Reduces landfilling of coal ashes from utility power plants.



Foamed Recyclable Building Material

Overview

- ◆ Developed by Century-Board USA
- ◆ One plant operating in the United States with the capacity to process 1 ton/hr of coal fly ash to make plastic lumber
- ◆ 1 pilot plant is making synthetic structural lumber using coal fly ash as the main ingredient

Applications

Among the products made with the Century-Board process are roof tiles, artificial slate, ceramic-like floor tiles, siding, molding, doors, utility poles, marine and dimensional lumber, picture frames, office partitions, and wallboard

Capabilities

Even though Century-Board will focus on the fly ash-based lumber, the following have been successfully tested in their process as the major ingredients: waste glass, sand, ashes from wood and municipal waste burning, wood flour, waste from metal smeltings, red mud from aluminum refining, mixed recycled plastics, coral dust, rice hulls and rice hull ash, agricultural plant ashes, waste cotton and polyester fibers, paper processing wastes, heavy metal contaminated waste, contaminated soil, foundry sand, sewage sludge, slate dust, and rubber tires.