

Cost savings heat up

Wood products manufacturer saves thousands by turning wood waste into heat source during the cold winter months

By Jeff Crissey

Over the last half century, Maki Corp. has evolved from a commercial roofing installation outfit into a company with two main focuses, a retail lumber/building material business and a wood and vinyl manufacturing operation. Today, the 123-employee company based in Gardner, Mass., has three retail

lumber yards and three manufacturing facilities. Its main product lines are new construction and replacement windows, patio doors, stair treads and interior and exterior entry doors. In addition, Maki manufactures custom work including custom moldings and paneling.

Since it moved into the building products market, Maki has been heavy into vinyl building products manufacturing. In the past several years, it has seen major growth in the solid wood market.

"The efficiencies have been built in to the vinyl side because that was dominating everything else, so we put more emphasis on that," says Jim LeBlanc, plant manager. "Now we are working more on our mill shop for solid wood.



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PRODUCTION LINE

We bought a new six-head SCMI moulder to help speed up production of our beaded moldings, and we also purchased a Raimann straight-line gang rip saw. We have also added bed sanders, planers, single-head moulders and rosette machines.

"If somebody wants a custom door header, we can mill that out and make our own fluted trim. We also do specialty work such as fireplace mantels. We've even done things for customers as small as oak bases for model boats. We have all the equipment here, so we can do just about anything."

Turning waste into profit

Maki strives to make the best use of its raw materials in its production facilities, including the recycling of waste in ways that will add to the company's bottom line. Vinyl shavings and scrap are collected in bins, which an outside company pays for and then regrinds and extrudes it to make new vinyl components. Scrap cardboard is also compacted and banded and then hauled to a recycling center.

Between its lumber milling, stock millwork and custom orders, Maki's mill shop generates a good deal of wood waste, and it has also found a way to make use of its wood residue and offal. The company purchased the first of four 800,000 BTU/hour furnaces from Biomass Combustion Systems in 1999 to heat its 30,000-sq. ft. vinyl window facility, then added three more as the primary heating sources for other buildings, including the door shop and mill shop. The furnaces meet federal EPA emission standards, a requisite for Maki since it is located near a residential area. Each furnace burns 120 pounds of wood per hour and can burn both green and dry wood waste.

"A lot of the wood that we have winds up as waste, and throwing it in the dumpster over and over is like throwing money away," says LeBlanc. "It makes more sense for us to save

the waste, burn it and generate heat for the buildings. We constantly get packaging and hardwood pallets from the building center that we couldn't do anything with except throw it away. Now we cut it up and save it, and we'll start burning it in the winter.

"As far as reusing waste in our mill shop production, we take full logs and slice them into boards before kiln-drying them. We cut off bark edges and any other lumber defects that we process – such as knots, cracks and checks – and store those in bins for later burning." The company commonly uses waste from pine and oak door jambs, mill shed pine, oak stair treads and casings as fuel sources.

Maki's cost savings for turning its wood waste into a heat source has been significant considering the company requires heat from late October through early April.

"If it's really cold, we'll turn the auxiliary heat for an hour while we fire up the furnaces, then we'll shut off the auxiliary heat for the rest of the day," says LeBlanc. "Without the stoves, we'd be using the auxiliary heat nine hours every day and paying those heating costs. It's hard to imagine how much our cost for fuel would be if we didn't use wood energy."

Prior to adding the wood burning furnaces, Maki disposed of its wood waste in dumpsters, then paid a \$158 disposal fee and \$98 per ton to a dumpster company every week to remove its wood waste.

"When you consider the fees to dispose of our wood waste and the cost of the fuel that we'd otherwise be burning, the return on investment is very quick by reusing waste from wood products." **MW**

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