



PHOTOS BY AL HARTMANN | The Salt Lake Tribune

A group tours the Liberty Tire Recycling plant Wednesday at 1398 Beck St. in Salt Lake City. A worker unloads tires onto a conveyor at the beginning of the recycling process before the tires are shredded and processed.

When road wears out rubber, the rubber becomes new road

Shredded tires can be reused in many products, and are increasingly being mixed into asphalt.

By **STEVEN OBERBECK**

The Salt Lake Tribune

The Liberty Tire Recycling plant in Salt Lake City still is waiting for that one big flurry of activity that typically comes with the first significant snowfall of the season.

The plant, on Beck Street just north of downtown Salt Lake City, recycles more than 4.5 million tires annually by grinding them up and turning them into “crumb rubber” — a product that is used in everything from artificial turf to the thick black mats that line the bottom of horse stalls

at fairgrounds and racetracks.

“What usually happens is when we get that first big snowfall, a lot of people will run out and buy new tires,” said Chad Barker, the plant’s general manager. “Dealers will be calling from all over wanting us to come out and pick up the worn out tires at their stores because they’re running out of space to store them.”

Liberty Tire Recycling, which is headquartered in Pittsburgh, Pa., bills itself as the largest recycler of old tires in the country,

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Chad Barker, general manager of Liberty Tire Recycling, takes a look at the rubber mulch at the end of the recycling process. The shredded “crumb” rubber can be used in a wide variety of products.

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Tires

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processing nearly 150 million of them each year, or about 50 percent of the available supply. And its Salt Lake City plant, which it has owned since June 2009, is one of the critical links in a chain of 38 such facilities found in North America.

"We're one of the big suppliers [of crumb rubber] in the West," said Bruce Dalebout, an account manager at the Liberty plant in Salt Lake City. "The Dallas Cowboys play on material that came from this plant. And last year we shipped 1.2 million pounds to Alaska, where it was used to see how it performed when mixed with asphalt."

New uses for crumb rubber are being found all the time, Dalebout said.

And one of the biggest growth areas — an area where the rubber literally meets the road — is as a binding agent in "rubber-modified asphalt."

By mixing crumb rubber into asphalt it is possible to create a road surfacing product

that wears better and lasts up to twice as long as the traditional blacktop material, said Jeff Smith, president of the Rubber Pavements Association, which represents suppliers and equipment manufacturers.

Still, rubber-modified asphalt can cost anywhere from 10 percent to 15 percent more than a traditional mix.

"In most cases, rubberized asphalt is laid using the same equipment as traditional asphalt, but its longer-lasting properties means that long-term maintenance costs are reduced," Smith said.

Rubber-modified asphalt is being used in about a dozen states, including several in the Rocky Mountain region. And although it has yet to make its presence felt in any meaningful way in Utah, it may be only a matter of time before it comes into widespread use here.

"It has been around for a while. And although I'm not aware of it being used in Utah, I know there are people in Colorado who really like it," said Michael Gladbach, the president of the Utah chapter of the American Public Works

Association and Sandy's city engineer. "It does seem to be making inroads as a proven product."

The Utah Department of Transportation tested rubber-modified asphalt 15 years ago but found its properties wanting.

"But the technology really has advanced since then, and we're very interested in looking at it again," said Tania Mashburn, UDOT's spokeswoman.

The trade industry's Smith explained that unlike in years past, those using rubber-modified asphalt today are able to change the formulation to address the specific needs of each project.

"The product used in Phoenix, where the temperatures often climb well over 100 degrees for much of the year, will be different than that supplied for Utah, where the temperatures fluctuate from around 100 degrees during the summer to below freezing in the winter," he said.

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How recycled crumb rubber is made

1 » Tires of every shape and size are collected from locations ranging from new-tire retailers and automobile service centers to military facilities.

2 » Those suppliers pay a small fee to have their worn tires hauled away, but typically that covers only the cost of collecting and moving the tires to the recycling center.

3 » Plant equipment grinds the tires up into small pieces.

4 » Magnets separate the scrap steel, and other fibers are removed by blowing air through the material.

5 » The result is clean recycled rubber that can be used in products ranging from rubber garden mulch to "tire-derived fuel" pellets that can be burned to heat industrial kilns.

Source: Liberty Tire Recycling