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Alakona operations superintendent Arist de Wolff displays used asphalt, left, and its recycled product, foamed asphalt.

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Paving the way to green

Alakona Corp. hopes recycled asphalt can find a future with the state

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KALAELOA — The owners of a local paving company are hoping its \$1 million investment in an asphalt recycling machine and related equipment will make themselves and the entire state a little more green — in more ways than one.

Alakona Corp.'s German-made Wirtgen KMA 200 creates what it calls a "Green Mix Hawaii" foamed asphalt that can be used as base course, the heavy layer of material that's sandwiched between the road surface and the ground.

The material not only reduces both the amount of old asphalt going into the landfill and the amount of virgin asphalt needed to make new roads, it's cheaper and keeps better, said Elisabeth "Betsy" Wilson, Alakona president.

"We cut down on the amount of (new) asphalt that's needed to produce the material, which cuts down tremendously on the cost as well as the amount of fossil fuels," Wilson said.

Alakona is scheduled to introduce its new product to government officials and fellow contractors next week. Wilson said the unveiling of its new product is timed to coincide with Earth Day on April 22.

The company is not the first in Hawai'i to use recycled asphalt, referred to in the road construction industry as "reclaimed asphalt pavement" or "RAP," to create base course. Grace Pacific, for instance,

has a hot mix asphalt facility that creates what's known as "asphalt treated base," or "ATB," which consists of about 20 percent to 30 percent recycled asphalt.



Alakona manager Max de Wolff sits at the controls of an asphalt recycling machine, which creates foamed asphalt.

Alakona's Green Mix Hawaii, however, would consist of 97 percent recycled asphalt, and only a smattering of new asphalt cement and water.

The cold "foaming" process is itself more environmentally friendly, said Arist de Wolff, Alakona's operations superintendent and Wilson's son.

"It cuts down on the amount of tar asphalt that you have to use," he said. The process also emits only a small amount of particulate matter that could pollute the air, he said.

Use of Green Mix Hawaii can also qualify for credits toward LEED Materials and Resources certification, a standard denoting environmentally sustainable construction that's being used by an increasing number of contractors, architects and businesses.

The foamed asphalt technology has been widely used in Europe, Africa and Asia and is starting to go into use on highways in California and other states on the Mainland, Wilson said.

At some point, assuming demand for the product warrants it, the company will begin accepting used asphalt from other companies, de Wolff said.

The Wirtgen can produce approximately a 20-ton truckload of material in six minutes, or about 200 tons an hour, de Wolff said.

The key to success for Alakona will be if it can convince the state, the counties and fellow contractors that using the Green Mix is the way of the future.

Green Mix is about two-thirds the price of ATB, but is only about 80 to 90 percent of the strength. ATB is allowed under federal, state and county specifications for base course materials used on their projects, but Green Mix is not. Alakona is hoping to change that next week.

State Transportation Director Brennon Morioka said he has staff scheduled to attend one of Alakona's upcoming presentations and is eager to hear back.

Morioka said his staff will test the material, and will be contacting other states to see what their experiences have been with Green Mix and similar products.

"We want to make sure that whatever we use today is not going to have unintended consequences in the future," Morioka said. In this case, durability would be an issue because the state does not want to have to pay more in maintenance costs over the life of the product, he said.

"The experience we've heard from the Mainland with some recycled materials is that their durability is not as great," Morioka said. "But if it's a good material and if it demonstrates a great benefit for the public and the state, we're more than willing to look at it, to try it and to use it."

Wilson said she's confident government officials will look favorably on the product. A majority of base course used in Hawai'i today is simply aggregate base, or crushed rock that's been compacted, she said. The move by government agencies has been toward specifications requiring asphalt treated base or foamed asphalt treated base, or what are considered "bound bases" because they stuck together.

"They're moving toward that because it has a longer life," she said.

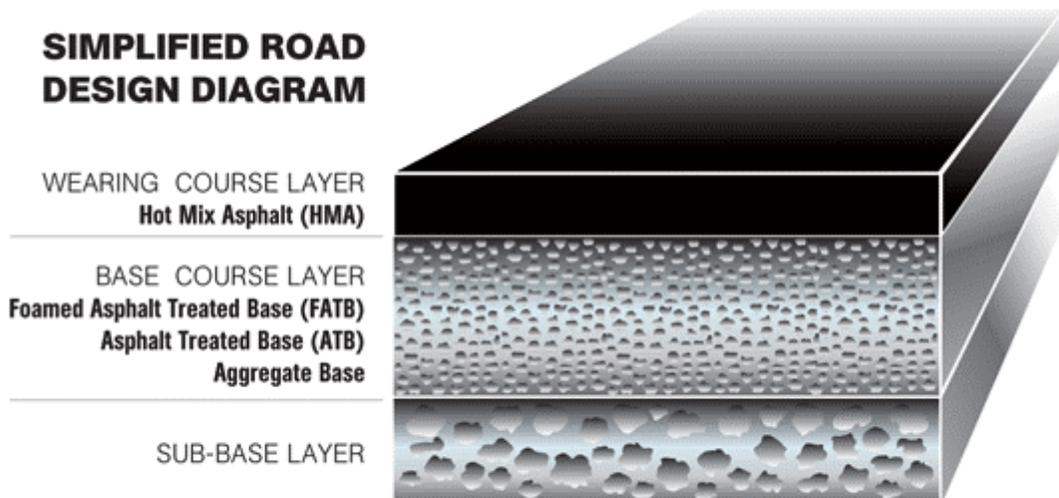
Aggregate base has a strength co-efficient of about .11, foamed asphalt base like Green Mix is about .28 and asphalt treated base is about .35, she said.

Jay Obrey, Grace Pacific's vice president of manufacturing operations, said his company has been using recycled asphalt in its operations for years and is encouraged others are following suit.

"It's going to take the cooperation and support from everyone, including contractors, policymakers and the public, to make a significant impact and increase our utilization of recycled products like this," Obrey said.

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