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PAVING AMERICA

A new twist of fabric installation

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On the cover:
The combination of a tack coat and geotextile can form a moisture barrier between old and new pavement, as in this project, on a 16-mile (61 kilometer) stretch of I-95 near Baltimore. The tack coat was placed over a 1 inch (25 mm) base layer of asphalt, then topped with two 1.5 inch (37.5 mm) layers of virgin hot mix, and a 0.75 inch (10.75 mm) open graded friction course.
Photo courtesy of Amoco Fabrics & Fibers Co., Atlanta.

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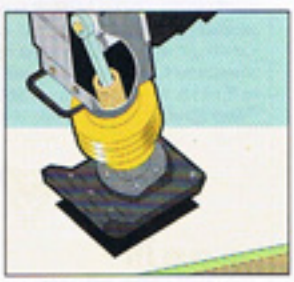
Departments:

Here's How It Works:



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The telescoping paving fabric installation machine places the paving fabric into the oil as the truck spreads the oil.

Contractor finds pot of gold at the end of the oil truck

New fabric installation method speeds production, reduces costs

It may not be for everyone, but it works for All American Asphalt of Corona, Calif. A paving fabric installation machine, mounted on an oil truck, has streamlined the contractor's fabric installation program so well the company now has four of the units in place, and is laying fabric all over southern California. They have installed millions of square yards (square meters) of fabric in just a few years.

The Grizzly telescoping paving fabric installation machine, manufactured by Geotextile Apparatus Co. (GAC), San Diego, places the paving fabric into the oil as the truck spreads the oil, eliminating the need for a tractor and operator.

On a recently completed project for the city of Moreno Valley, All American Asphalt placed approximately 750,000 square feet (67,500 square meters) of paving fabric on winding curvy roads. "The job was completed considerably faster and the installation was virtually wrinkle free, even on the curves," says Kevin Moffatt, project manager.

When it is mounted onto an oil truck, the truck's speed increases daily production over a tractor, says Mounque "Monk" Barazone, the owner of GAC. The fabric's tension and stretch are also increased, which means it can be layed even more smoothly. Tight curves can be pulled almost wrinkle-free and straight passes are flawless, he says.

GAC's design incorporates a folding mounting bracket on the back of the oil truck's frame. The arms attach to Grizzly's patented universal mounting bracket and hydraulically lifts the Grizzly up and down for highway transportation as well as for loading rolls, says Barazone.

All American uses the hydraulic telescoping model, which has chevron angled brushes and a dual PVC tensioning system which telescope with the machine's arms. Braking roll holders slow the speed at which the fabric turns, and increase tension and stretch put to the fabric. A third sliding arm is designed for short rolls 1 foot to 10 feet (0.33 to 1.33 meters) centered or off centered.

"Other attempts were made to mount a laydown unit on the back of the oil trucks. There were two very big problems to overcome to avoid damaging the fabric with an oil truck installation," he says. The first problem, says Barazone was the fabric was too close to the oil, only 4 to 6 inches (100 to 150 mm) away. Severe damage to the fabric from oil splatter and excessive heat occurred, both burning and shrinking the fabric. The second problem was that the engineer and operator couldn't tell if the oil spread was uneven due to clogged

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Contractor finds, from page 24

valves. The fabric covered the oil too quickly. This caused poor bonding and eventual stripping of the asphalt overlay from the fabric, he explains.

"GAC's mounting design overcomes both of those problems, and it has added benefits," says Moffatt. "The system pulls the Grizzly laying the fabric 5 feet (1.66 meters) behind the truck. The fabric is placed far behind so that the oil spread can be checked at any time by the engineer and operator. The oil has more time to cool from the ground temperature so burning and shrinkage are generally not a problem."

An added benefit is the oil has not cooled as much as it would using a tractor, says Moffatt. "We get better adhesion, which keeps the dump trucks from picking up the fabric on their tires," says Moffatt.

On a very hot day, when the afternoon asphalt temperature exceeds 200° degrees F (93° C) and the oil is not cooling fast enough, the unit is designed to be quickly unpinned from the truck mount bracket and attached to a tractor in a couple of minutes. "Most of the fabric is placed earlier in the day, before the ground temperature rises, or in the evening so switching the unit is rarely required," says Moffatt.

He likes the cost savings the company has seen from using the new method. "The cost savings are the big factor for us as project managers and contractors. We can now take on small projects where sending a tractor and operator along with the truck was not cost effective in the past," explains Moffatt.

"The fabric had to be laid by hand rolling, a process which puts the fabric down wrong side up and is almost always plagued by wrinkles," he continues. "Now we send the truck and place the fabric correctly, wrinkle free at the same time we spread the oil. The installation is much faster and superior to hand placement."

Paving fabric has two sides, one fuzzy and one heat bonded. If the fabric is placed with the fuzzy side up, the trucks and equipment delaminate it, ruining the fabric. Tests have shown the fuzzy side acts to reinforce the bond at the interface to the oil and should always be placed down. The heat bonded side was developed to resist wear from traffic and protect the fabric until the asphalt is placed onto it, says Barazone.

"The oil truck method is not for everyone," he admits. "First you must already own or buy an oil truck." The traditional models mounted to a tractor, are still ideal for every contractor large or small. The new oil truck system is great for the contractor who owns an oil truck, does lots of fabric work, or who has a large project."

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