

PAVINGNEWS

A Caterpillar publication serving the global paving industry



Smooth Sailing

Preparing for the America's Cup



Small Part, Big Payoff

Extending mill bit life has significant impact on production

CATERPILLAR®

My Kind of Technology



Lieven Van Broekhoven
Worldwide Sales
and Marketing Manager

I love technological advances, especially when the technology is so integrated with the product that I don't have to go to school to learn about it. I want technology that simply helps me do a better job or be more efficient without adding complexity.

This issue of *Paving News* has several outstanding examples of how Caterpillar uses technology to make products more reliable and more productive. The CAN-bus electrical system now used on most Cat® Screeds is basically invisible to the paver and screed operators. Yet, the CAN-bus cleans up all the electrical routing and simplifies on-board communications. It's unbelievable but wiring on Cat Screeds has been reduced by more than 50 percent because of the new technology. And, the components on the screed and the tractor share information better.

For example, Cat Grade and Slope Control for Asphalt Pavers is designed to take advantage of the CAN-bus system. Because the electrical interface

between the screed electronic control module and the grade controls is better, screed control is more reliable and more responsive. Plus, the new technology provides a better platform for three-dimensional paving if that's the direction you want to go.

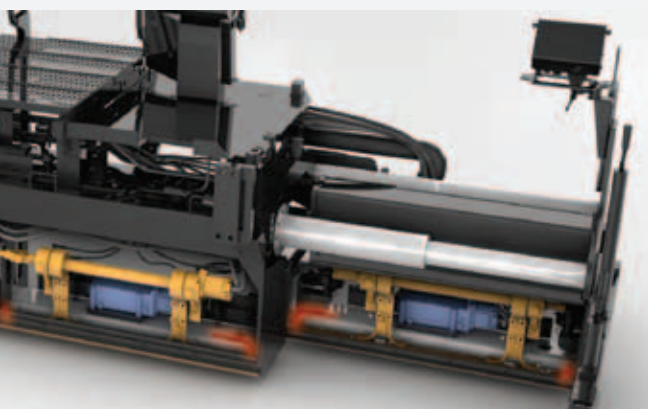
I would also like to mention the story about the manufacturing technology being used on Cat Cold Planer cutter bits. We've always had a great rotor design and a reputation for ease of maintenance. The latest focus on the manufacturing process for the cutter bits incorporates state-of-the-art powdered metal technology. The result is bits that can provide up to 50 percent more service life than other bits. From the crew's standpoint, nothing changes. They have nothing new to learn. The equipment operates the same way. Cutter maintenance is still done the same way—just less frequently so the cold planer gets the tons in the trucks in less time.

Caterpillar makes the transition to the new technology effortless. That's the kind of technology that I want to buy. ■

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^ The importance of the Cascais street meant it had to remain open while the work was done.



Smooth Sailing

Paving job goes perfectly in preparation for America's Cup

The Portuguese village of Cascais has enough attractions—including magnificent views of the Atlantic Ocean—to make it a tourist destination. The historic hotels and winding roads that nearly touch the ocean also have been the backdrops of movies, including a “James Bond” film. In addition, the city has a rich racing history, having hosted the FI Portugal Grand Prix and numerous motorcycle events.

The attention was even greater this year with the arrival of one of the world's premiere sailing races, the America's Cup, in August.

With a busy summer ahead, Cascais municipality realized it had to make improvements to Avenida Marginal, the waterfront thoroughfare that leads to the village and the main attractions.

The main issue with the road was its drainage. “In times of heavy rainfall, stormwater tributaries

accumulate, forming a river and making it dangerous to cars and pedestrian circulation,” an engineer for the village of Cascais wrote in a report.

The importance of the street meant that the work had to be completed before the America's Cup crowd arrived. Yet the seasonal tourists also meant the road had to remain open while the work took place.

Sanestradas, a respected paving contractor, was chosen for the job based on the time requirements and the need for high quality.

The project

Cascais municipality's project involved a 1 km (0.62 mile) section of Avenida Marginal. Much of the road's surface was in good shape, with the exception of about 65 m (213'). That section of road had been damaged during a building construction project. The 65 m (213') also would be the location for a new



AT A GLANCE

Company: Sanestradas

Owner and Managing Director:

Daniel A. Gonçalves

Headquarters: São Domingos de Rana

Founded: 1966

Services offered: Engineering;
asphalt manufacturing; paving

drainage system, with rainfall channeled to it via curbs along the remainder of that 1 km (0.62 mile) section.

Directing the water to those drains created another challenge. About 300 m (984') of the road was so level that water did not flow.

A simple solution would have been placing a new surface lift with a slightly steeper grade. Yet that choice was dismissed because of low curbs—an average of only 100 mm (4"). Applying a new bituminous layer to create the grade would have simply caused rain to run over the curbs. The flooding would have continued.

Cascais municipal officials came up with a strategy. First, they proceeded with the new drainage system. The 65 m (213') of existing curb was removed, and the ditch floor area replaced with two 200 mm (7.8") layers of crushed,

aggregate base of extensive granulometry. That base featured irrigation fluidized MC70 bitumen at an impregnation rate of 1kg/m².

A binder layer with a thickness of 11 cm (4.3") was placed on top, followed by the wear layer with an average thickness of 6 cm (2.3").

The remainder of the road did not need new base layers or improvements. Therefore, milling crews removed 6 cm (2.3") of material. The paving crew then placed an AC 14 Surf 35/50 (BB) wear layer over both the rebuilt and milled portions of the project.

Tight schedule

Crews were given just two weeks to complete the work, but the time was actually considerably less because work was only allowed at night. Crews began work at 8 p.m. or 9 p.m. and continued until about 7 a.m.

the following morning.

In addition, Avenida Marginal had to remain open to traffic with no limitations on Fridays, Saturdays and Sundays to allow tourists to come and go unimpeded. That meant the two weeks was in actuality eight days.

Further complicating the project was the requirement to keep traffic circulating, though in a limited manner. This led to a process of milling one lane for two nights, then tandem paving and compacting for the next night. At that point, the lane was completed.

Milling

A Cat® PM102 Cold Planer removed the 6 cm (2.3") of asphalt in the required areas. The PM102, smaller than the Cat PM200, was chosen because its size made it a better fit for the narrow road. Yet the machine delivered the required





productivity, too, as it had to mill a lane in only two nights.

The tight timeframe left no margin for error. Because of this, two service technicians from STET, the Cat Dealer in Portugal, remained on the jobsite throughout the night in case they were needed. Fortunately, there were no problems.

Paving

When an entire lane was milled, tandem pavers went to work. Delivery trucks end-dumped the material into the pavers.

Sanestradas chose the new Cat AP555E with an AS4252C Screed. Working just a few meters ahead of it was the tried-and-tested Cat AP655D.

Pedro Santos, project chief for Sanestradas, was pleased with both pavers. One key reason: Their productivity enabled the job to be completed in a short timeframe. “With the two pavers working in tandem we succeeded in finishing the job much

faster than expected, and with excellent smoothness results,” said Sr. Santos.

Caterpillar had a technician specialized in handling pavers on hand to ensure smooth integration of the new AP555E. He closely followed both the performance of the machine and the crew and offered suggestions for improvement.

Compaction

Three Cat compactors—the CB434D, PS300B and CB34—easily kept pace with the two pavers, and met density specifications.

The PS300B worked in breakdown mode, and was right behind the second paver, the AP555E. The longitudinal joint was done “hot,” and easily compacted, because the first paver worked only a few dozen meters ahead of the second.

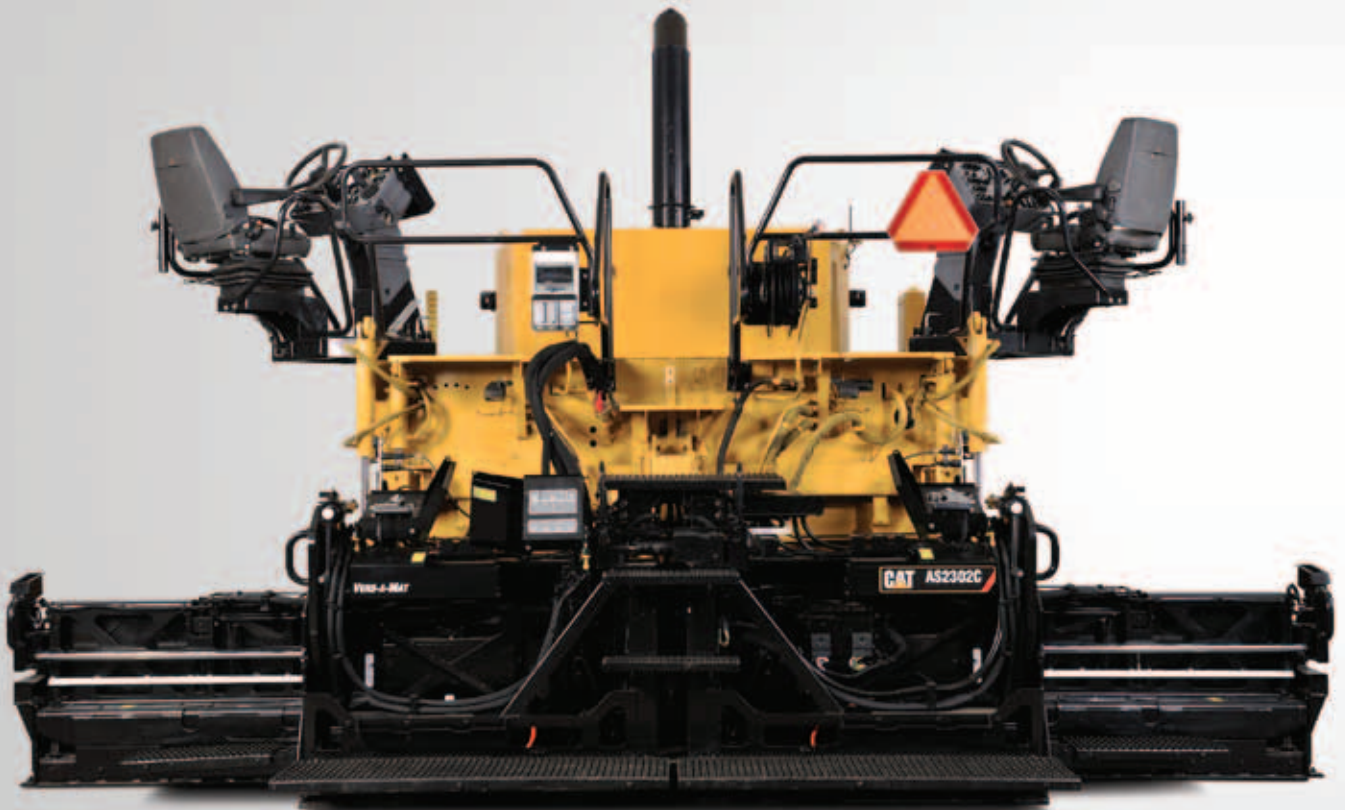
The compactors worked at a distance that enabled compaction and kept pace with the paving train. The number of passes depended on the

pace of the paver and the delivery trucks. The compactors treated the two freshly placed mats as if they were one and worked across the entire width of the lane.

Completion

Mr. Santos and other Sanestradas representatives were pleased with the performance of the Cat cold planers, pavers and compactors—and the Caterpillar dealer. Many officials from both Caterpillar and STET were on-site to ensure the highly complex project was a success.

No spectators were more important than Cascais Municipality authorities, who also kept a close watch on the jobsite. They saw machines making quick work of the milling, paving and compaction and were pleased the road was completed in time for the America’s Cup—while serving all the tourists so crucial to the village’s economy. ■



Cat® Screed Improvements Enhance Profitability

Technology, convenience built into new models

Many pieces of the paving equation must come together to create smooth mats. While all elements are crucial to the process, none are more important than the screed. In fact, a properly specified, selected and operated screed can be the difference between a satisfied customer and costly rework.

Even though Cat® screeds are already recognized as some of the most advanced in the industry, designers at Caterpillar Paving Products are fully aware of the need for continuous improvement. As improvements are made, rest assured key features and benefits of previous screed models won't be forgotten.

They include:

- Great control for urban and commercial applications, minimizing handwork
- Heavy-duty frames that prevent flexing and enable material to easily flow out to extenders when increasing paving widths
- Smooth, consistent results on mainline paving
- Easy-to-operate, low-maintenance screed plates
- Superior serviceability

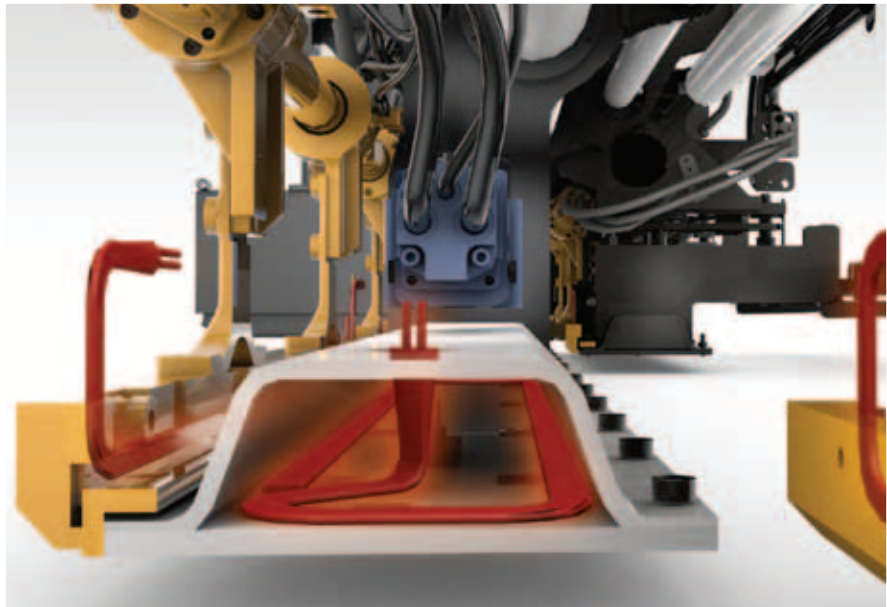
Customers have provided key input on how to further enhance the existing product line. Engineers have taken that input, as well as research gathered by experts in the field, and created four key improvements that are being phased into the entire screed line. They are:

1. Utilization of a CAN-bus system
2. Integration of an improved grade and slope system
3. Electric heat enhancements
4. A convenient toolbox

CAN-bus system

This is a key improvement that already has been implemented in many Cat screeds, and will be added to others soon. The CAN-bus system substantially reduces the amount of wiring running between the operator's controls and the components. In fact, some of the new screeds have seen a wiring reduction of over 50 percent.

How could so much wiring be eliminated? Previously, a wire ran from each control switch through the screed harnessing to the tractor control system. The information then was routed from the tractor back to the screed along a separate wire to the proper motor or controller to carry out the function. Now the screed handles these functions internally, and only communicates



▲ The electric screed system has been updated to extend the life of heating elements.

relevant information to the tractor over dedicated communication wires.

The reduction in wiring has two important customer benefits. First, the reduction lessens the possibility of a problem with wiring. Second, if a problem does occur, it's much easier to isolate. Technicians and even operators will find it much easier to troubleshoot.

The screed continues to respond quickly to commands. The CAN-bus system is simply an improved method for the various components to easily communicate with one another. These communication changes allow for product improvements without costly wiring changes.

Cat Grade and Slope option

The addition of this system into the new screeds means less reliance on the operator. Paving contractors will see better control of yield, and an associated

cost-savings, as the screeds become more automated. The automation provided by grade and slope also helps place smoother mats.

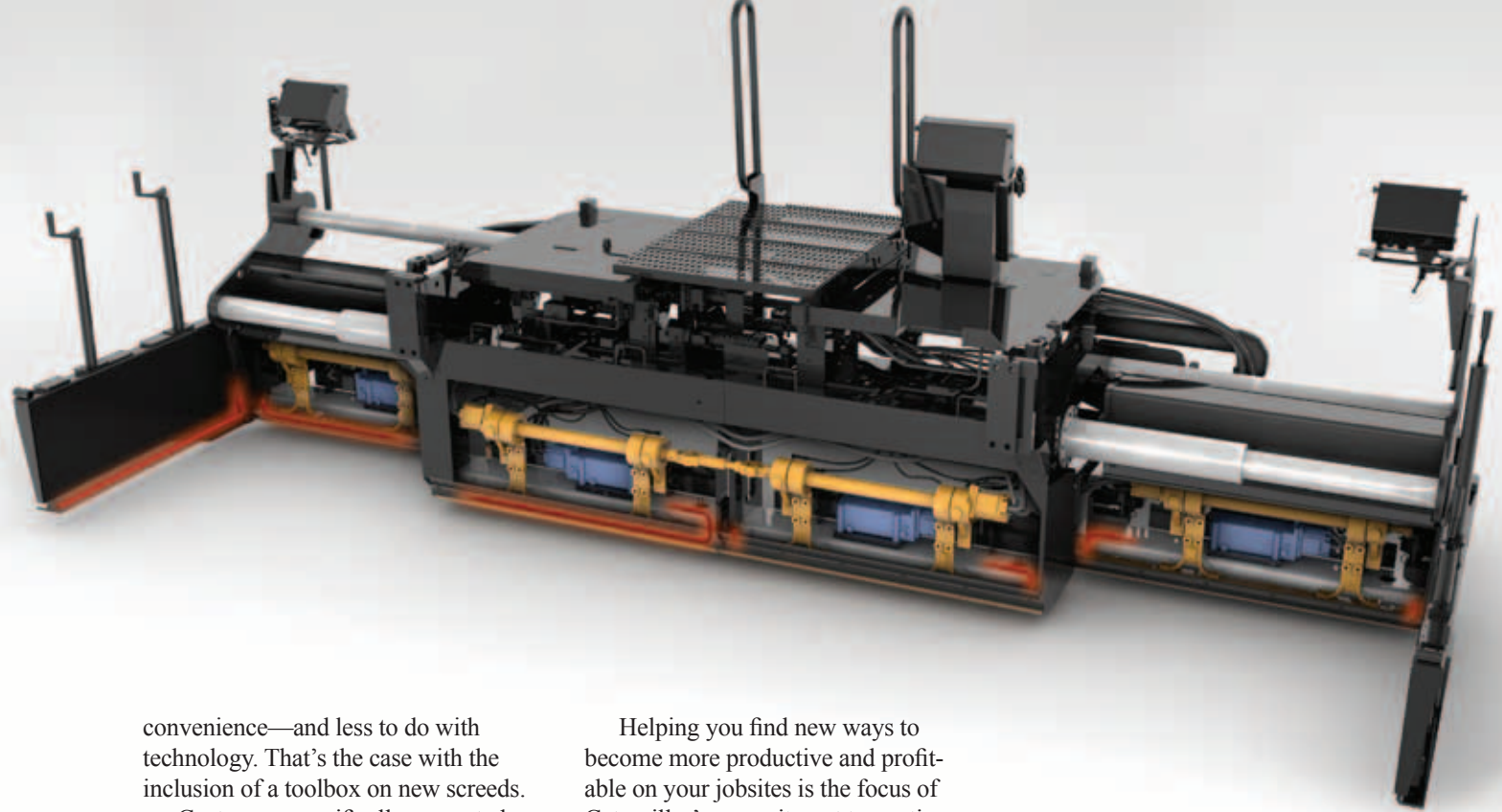
In addition, its implementation enables contractors to benefit from the quality improvements associated with 3-D paving techniques and the comprehensive, multi-layered information they provide.

Electric screed improvements

Paving contractors over the last few years have embraced the electric screed system and the consistent heat it supplies—from one end of the screed to the other. Caterpillar engineers have updated that electric system to extend the life of the heating elements.

Toolbox

Sometimes an improvement has more to do with customer



convenience—and less to do with technology. That's the case with the inclusion of a toolbox on new screeds.

Customers specifically requested the toolboxes. They are conveniently located so operators can store key jobsite tools right on the screed.

Helping you find new ways to become more productive and profitable on your jobsites is the focus of Caterpillar's commitment to continuous improvement. See your Cat Dealer for information on the introduction of the screed improvements by model. ■

THE LATEST IN THE LINEUP

The Caterpillar AS3301C Asphalt Screed is the most recent to join the Caterpillar Paving Products lineup. It replaces the Extend-A-Mat 10-20B.

Like other Cat® screeds recently developed—or under development—around the world, the AS3301C will show improvements in four key areas: Wiring improvements thanks to a CAN-bus system, integration of an improved optional grade and slope system, electric heat enhancements, and the addition of a toolbox.

Other changes to the AS3301C include:

A spinner for the depth crank. The spinner makes the crank easier to turn,

conserving operator energy throughout the shift.

Recessed switches. Prevent un-intended actuation by the operator.

An improved ergonomically correct control panel. The arrangement of the panel was adjusted based on input from screed operators.

An integrated coily cord. The cord, located near the sonic feed sensor, previously ran from the sensor to the back corner of the paver. It was exposed to damage during normal paving practices or even during travel. The cord now is integrated into the screed's frame for added protection.



A cupholder. The new screed includes a spot to hold a bottle of water or a coffee mug. The holder can be folded when the paver works in a confined area or when encountering obstructions.

A Year of Trade Shows

Caterpillar paving products were well-represented at trade shows around the world in the last year. Caterpillar and Cat® Dealers continued to show their global commitment by participating in dozens of the events.

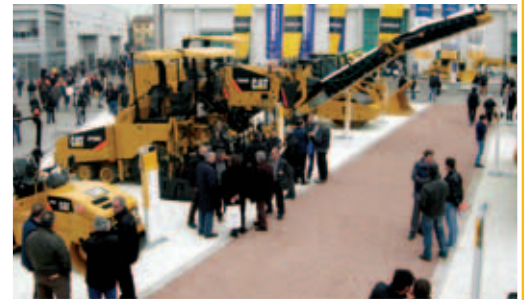
No matter what the location, customers can benefit from trade shows. The events provide:

- **A chance to compare Cat machines, side-by-side, with competitive equipment**
- **A close-up view of new products**
- **Experts who can answer questions**
- **A chance to talk about other needs, such as product support**

Talk to your Cat Dealer about upcoming trade shows in your area. ■



Ankara, Turkey



Verona, Italy



▼ Bucharest, Romania



Zaragoza, Spain >



▼ Mumbai, India





Six-wide paving train simplifies tough compaction spec

Longitudinal Joint Perfection

The Niagara District Airport primarily serves general aviation aircraft, as well as both business travelers and tourists. In fact, many aerial tours of Niagara Falls originate at the facility in Ontario, Canada.

The airport opened in 1929, and six years later was relocated a few miles to its present location. This fall the airport underwent a transformation—including the rehabilitation of the main 1500 m (1,640 yd) runway—nearly as significant as that move made so many years ago.

The job had a key challenge: Specs stipulated that there could be no cold longitudinal joints on runways within 30 m (33 yd) of the base course center, and within 26 m (28 yd) of the surface course center. Essentially, the specification required the paving contractor, Dufferin Construction Company—a division of Holcim (Canada) Inc.,—to pave the entire width of the runway at once. Dufferin accomplished this by using six Cat® AP1055D Asphalt Pavers operating in tandem. This approach ensured the joints would be hot when compacted.

The process created significant production demands for the plant, haul trucks and pavers. Of course quality could not be compromised. “We still had to take a ‘best practices’ approach,” said Dave Pimpinella, Project Supervisor for Dufferin Construction. “That always means continuous movement. This job, despite the joint spec and the production demands, was no exception.”

The project

The scope of the work at Niagara Regional Airport was impressive. It included the cold planing and paving of two existing runways and two existing taxiways; as well as the development of a third taxiway.

Also included were expansions of aprons and a parking area; new lighting for aprons and roadways; site servicing to a new terminal building; and new sewer and water mains for the existing infrastructure.

The project included 30,000 metric tons (33,000 U.S. short tons) of asphalt; 20,000 m³ (26,160 yd³) of earth moving and soil excavation; 40,000 metric tons (44,080 U.S. tons) of granular material; 1,100 m (1,200 yd) of water main; 400 m (437 yd) of sewer; 3,000 m (3,280 yd) of sub-drain; 100,000 m² (119,600 yd²) of asphalt pulverizing; 80,000 m² (95,680 yd²) of asphalt milling; 6,500

m (7,100 yd) of perimeter fencing; and 15,000 m (1,640 yd) of airfield pavement marking. Finish tolerances were required to be within 6 mm (1/4") of the design elevation.

Six pavers at work

As stated, no longitudinal cold joints were allowed on the runways within the center 30 m (33 yd) of base asphalt, and 26 m (28 yd) on the surface lift. In addition, no longitudinal joints were allowed within any taxiway. The density spec was 100 percent.

This requirement made it even more urgent that all hot mix be placed without interruption. The biggest challenge was the main runway, where two lifts were placed. The base course was placed at a depth of 80 mm (3"), yielding 70 mm (2.75") when compacted. The aggregate was 19 mm (3/4") and smaller. The surface course was compacted to 50 mm (2") and included stone with a 12 mm (1/2") sieve size.



Specifications prohibiting cold longitudinal joints led to the use of the tandem pavers.

Delivering the mix to the jobsite were 28 haul trucks. Two material transfer vehicles, each with 30-ton (33 U.S. ton) capacity, shuttled between the six pavers. “The pavers were constantly being loaded,” Pimpinella said. “We had bins in the hoppers to add capacity. The pavers were taking on as many as 15 tons.”

But the production all started at the plant. “It had to be steady,” Pimpinella said. “The key was having the truck loading and haul properly planned so the flow of asphalt stayed ahead of the pavers. The idea was to never stop. We especially didn’t want any hard stops because they could lead to a lift on the runway.”

The trucks can handle 30-ton (33 U.S. ton) loads, as opposed to about 20 tons (22 U.S. tons) in a tri-axle trailer. That capacity helped meet the productivity demands. “We planned to place about 350 tons (385 U.S. tons) an hour and we were pretty close to that goal,” Pimpinella said. During

one 18-hour stretch, 6,600 metric tons (7,273 U.S. tons) were placed.

How was such production achieved? “We did a lot of preplanning,” Pimpinella said. “We had to make sure we had the right number of everything—machines, operators, supervisors.”

And of course trucks. “We had so many trucks coming and going, we had to have two to three people directing backups,” Pimpinella said. The key was ensuring a truck was always in front of the transfer vehicle.

Working off the slope

Crucial to the success of the main runway paving was the placement of the aggregate base. “The key was setting that stone up right,” Pimpinella said. “We had a slope of 1.5 percent off the crown. We established that crown with the stone, and used a GPS system to make sure we were exactly on target. We wanted to take care of that slope with the stone, and then just have



the pavers work consistently.”

Six pavers worked in tandem, placing asphalt at a width of 32 m (35 yd) during the base course on the main runway. Two “controlling pavers” led the way, with the crown between them. “We set up the first paver to the right of the stone



^ Steady movement was more crucial than ever given the volume of machines on the job.

crown,” Pimpinella said. “That operator had the left edge of his paver at the center of the runway. He pulled ahead, then the second paver started working on the left side of the crown.”

The two pavers stayed close together. When they had advanced about 30 m (33 yd), a paver was added to the outside of each. When those pavers had moved 30 m (33 yd), two more pavers were added. “We just kept moving slowly, and adding pavers slowly,” Pimpinella said.

Compaction

The paving crews didn’t take any extra steps for the joints in terms of overlap. The compactors essentially rolled the freshly laid surface like one wide mat, Pimpinella said. “There was some distance between the pavers, so obviously we had to keep the compactors close as the mats were being laid. But there was nothing special going on in terms of the compaction of the joints. The rollers just moved along.”

Three steel-drum rollers handled breakdown compaction behind the six pavers. The rollers would go as far back as 50 m (55 yd) but not much more. Two rubber-tire rollers followed.

Both the breakdown and rubber-tire rollers made about five passes each. Testing was done immediately behind them to ensure proper compaction had been achieved. A steel-drum roller made one last pass to remove marks.

The experts

Having equipment that can keep pace is essential, Pimpinella said. “It has to be reliable, too. You can’t have breakdowns on this type of job, particularly with that joint spec. We were happy with the equipment out there.”

The professionalism of the crews also paid off. “Our crews are experienced and productive,” Pimpinella said. “We have four asphalt crews, and we typically used two to



two and a half per day—sometimes more. These guys pave highways every night. They normally work two pavers wide, so in some ways this wasn’t too big of an adjustment for them. They know how to roll, they know how to stay tight to the next guy and they know how to control the equipment.

“When you’re laying down that much asphalt in that short of a time, you need the best equipment and experience.” ■



Significant investments made at Caterpillar Paving Products plants

Improved Facilities Benefit Customers

Many of the facility improvements at Caterpillar Paving Products are taking place inside manufacturing facilities. But customers from the outside world will most appreciate the changes.

“While many of our competitors choose to blatantly ‘advertise’ their investments in facilities, Cat® Paving is quietly, behind the scenes, making the aggressive investment necessary to continue our leadership position in the worldwide paving equipment industry,” said Jim McReynolds, Global Paving President.

The improvements to Caterpillar Paving Products plants — in Rantigny, France; Minerbio, Italy; Xuzhou, China; and Minneapolis, U.S. — have been made to provide increased volumes, better quality and timeliness that customers require, McReynolds said.



Among the changes to the facilities:

- **Improved materials receiving areas,** including the utilization of modern technology for scanning, tracking and inventorying all incoming materials. The receiving areas also have a direct line to the distribution warehouse. “It’s enabled us to speed up our assembly processes and meet our delivery dates,” said Joshua Meyer, Region Manager with Caterpillar Paving Products for Europe, Africa and the Middle East.
- **Only providing what is needed—when it’s needed.** “We now deliver only the components for a specific machine to a station,” said Giacomo Minchio, manager of the Minerbio and Rantigny facilities. “It improves space utilization, and makes the assembly process more efficient. It’s an improvement that helps avoid waste. When we avoid waste, we help our customers with cost.”
- **A major workflow reorganization.** “We’ve reconfigured the lines and the flow,” Meyer said. “The increased efficiency means the products are built faster, and also improves quality because there are fewer starts and stops along the way.”
- **A reconfiguration of work stations.** The amount of work to be completed at each station is better balanced. Making sure there are quality checks and the right amount of work at each station—and the proper tooling—is part of the improvement plan.
- **The use of “island” offices.** Process engineers and managers are now located directly on the line. “They’re essentially in an all-glass bubble on the assembly line,” Minchio said. “They’re closely observing the process. If issues arise, they’re immediately available to provide solutions and advance production.”
- **More comprehensive pre-delivery inspections.** The new process includes more inspections for each machine. They’re extremely comprehensive, and done at various



Reorganized workflow and work stations have improved quality and lessened the manufacturing time at Caterpillar Paving Products facilities, including this plant in Minerbio, Italy.

points during the process. Machines also are randomly chosen for additional audits. Steps also are being taken to eliminate any troublespots in the production line.

“To summarize, we are improving our facilities to better meet the demands of the various global markets we serve,” said Lieven Van Broekhoven, Worldwide Sales and Marketing Manager. “There has been considerable consolidation in the Global Paving Industry in the past few years, and we are positioning ourselves to remain the best partner for our paving customers in the markets where we are currently the leader—and to become a stronger

contender in those geographical areas where we see potential for growth well beyond our current position.

“The improvements in our facilities are the result of our recent phenomenal global growth and the experience we have gained from that. Our production, logistics, purchasing and marketing teams all contributed to the concepts and implementation of the improvements mentioned. We call this Cat@work.” ■



Mill Bit Life a Big Factor in Cost-per-Ton

Many contractors consider power a key indicator of cold planer productivity, and rightly so. Power certainly is an important contributor to overall performance.

Those same contractors may not be as likely to consider the impact of mill bit life when factoring productivity. Yet the useful life of those bits has an enormous impact, on both production and costs.

First, long-lasting mill bits maximize machine uptime. During the course of a year, mill bits with extended life can deliver hundreds of hours in increased productivity.

An underrated, yet key, benefit is that extended bit life enables replacement at the time of the crew leader's choosing. That means new bits often can be installed between jobs, or at the end of the workday when operators, haul truck drivers and laborers are off the clock.

This added efficiency provides significant cost-savings, and should be considered at the time of purchase. Bits with lower initial purchase prices



can prove to be surprisingly expensive when cost-per-ton is measured.

That bottom-line cost is why Caterpillar puts an enormous emphasis on extending bit life. Three key factors help extend life:

1. Bit design
2. Manufacturing techniques
3. Exclusive Cat Conical Tool Holders

Bit design

Caterpillar Paving Products offers a variety of mill bits, with varied features, to precisely match the materials at your jobsites. Properly matched bits not only offer productivity on the jobsite, but function efficiently

to extend life.

Among the life-saving design features of Cat® mill bits:

- Tapered bodies that move abrasive material away from the holder.
- Wear-reducing washers.
- High-carbide content for longer wear life.

Manufacturing techniques

The manufacturing process and materials used also have an impact on mill bit life. Caterpillar Paving Products offer Master Grade carbide bits, which can provide up to 50 percent more life than standard bits. The focus of the manufacturing





▲ Tapered bodies and wear-reducing washers help extend the life of Cat mill bits.

process, from the selection of materials to final heat treatment, is to produce mill bits that last.

1. **Preparing powders.** A hardening material, such as tungsten carbide, is combined with a cobalt bonding material. These materials are milled, mixed, dried and transformed into a powder for pressing.
2. **Shaping.** State-of-the-art pressing machines turn the powder into a raw form of the bit.
3. **Sintering.** This high-temperature process fuses the bonding material and solidifies the hard metal product. Sintering is so intense that the size of the bit shrinks by 20 percent during the complex process, leaving behind a compact, hardened bit.
4. **Surfaces/tolerances.** The bits are so hard that diamond tools must be used to polish and hone them during the last stage of the process.

Exclusive Cat Conical Tool Holders

The holders themselves are built for extended life, and a tapered fit to maintain tightness. Conical tool holders extend bit life by:

- Improving rotation for even wear.
- Holding bits away from the rotor mandrel. This isolates the bits, keeps material away from the drum—and extends drum life, too.
- Breaking away if they strike an immovable object, such as a manhole. The break-away feature helps prevent damage to more expensive components of the rotor drive system.

If you're evaluating mill bit options solely on initial price, you're missing three important elements of the equation: mill bit life, the productivity increases/savings that result from longer change intervals and the negative impact of more frequent downtime on your production schedule. To learn more, talk with our milling and paving experts. ■

TIPS FOR EXTENDING BIT LIFE

1. Choose the right bit for the right job
2. Make sure your water system is functioning properly to keep bits cool and clean
3. Adjust your conveyor speed to ensure proper material cleanout and reduce abrasion



Long-lasting mill bits maximize machine uptime. >



**NOW AVAILABLE
IN EXTRA-WIDE.**

EXTRA-WIDE AND ULTRA-PRODUCTIVE.

Our PM200 is now available with an extra-wide 2.2 meter (88") drum. A wider cut without sacrificing the high maneuverability the PM200 is famous for. More production, more versatility, and industry leading service and parts availability from our world-wide Cat® Dealer network.

Milling contractors around the globe are switching to Caterpillar because we offer proven technology and services that make quality construction and turning a profit easier. To learn more about our range of Cat Cold Planers, visit your Cat Dealer today.

www.cat.com

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