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Number 21

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- **Infrastructure** Camargo Corrêa using european methodology

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TABLE OF CONTENTS

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African airport revitalization

Contractors at work on important airport terminal sites on the African continent

Page 12

São Paulo market at full steam

With constant investments in road improvements across São Paulo, Brazilian contractors based in that state are stepping up business

Page 18

OPINION

Competitive Solutions

Luiz Marcelo Tegon
Vice-president

Over the past few decades, Ciber has developed both high performance technology and strong customer relationships. If one of the essential components in ensuring client satisfaction is improving our machines, another fundamental factor is providing the right service. To this end, we are investing heavily in constant development and training of our distribution systems and dealer network.

We strive for the efficiency of our specialized techniques, supported by an extensive training and development program, as well as by making replacement parts readily available. Based on this premise and with the idea to help our clients obtain greater efficiency from their equipment, this issue contains a new section, entitled "Technicians Advice." This section will offer valuable suggestions for usage, operation and maintenance, thereby supporting the application of the best practices regarding the use of Wirtgen Group products.

At the same time our manufacturing and product technology are evolving, we are also ensuring the equipment's operational availability and efficiency in every region our machinery can be found in operation – whether in Latin America, Africa or Australia.

In tune with these activities, we recently broadened Ciber's mission statement, which can now be described as follows: "Supply innovative and competitive product and service solutions for the paving, compaction and mining markets. The key to our new mission is in the term "solution." We do more than just produce machinery; we offer complete solutions for every client and market we work with, ensuring the best performance possible and productivity for our equipment and generating maximum customer satisfaction. This makes us an ideal partner and our segment's best choice. This is how we maintain Ciber as a benchmark company, a leader in the products and markets in which we are active.

FBS Group bets on new technology in Brazil

For the past 19 years, São Paulo based FBS Group has focused on executing projects involving site leveling, paving, drainage, sanitation, civil engineering and other construction work. Their work is directed towards industry, trade, real estate development and the public works segment. In order to ensure the excellence of their services, they invest in technology and in their skilled staff of approximately 900 employees. Over the years, they have modernized their fleet of machines and diversified their processes, thereby obtaining increasingly positive business results. For example, in 2002 they began specializing in interlocking floors, creating Intercity for the manufacturing of cement artifacts. Three years later, they innovated with Concrecity, responsible for developing machined concrete. In 2009, they added Usicity to their complex, concerned with producing and selling special asphalt mixtures. Not only that, but they have renovated their industrial park and strengthened the professionalization of management. Continuing to innovate, FBS has brought cutting edge technology to Brazil. They acquired two Vögele pavers with SprayJet. The deal was sealed at Bauma – the industry's largest trade show for heavy construction machinery and equipments, held in Munich, Germany in April – where Ciber presented its innovative technology to the sector.

FBS will be using the new equipment in the capital city of São Paulo to provide services for the City Hall. The paver stands out from the competition by reducing time and increasing quality and productivity through application of the curing compound with a SprayJet system simultaneously with the paving work. This technology ensures that all of the curing compound is preserved without any loss or damage to the lane being caused by the equipment.

It is recommended for all types of asphalt paving, especially in the application of hot micro layers.

The Super 1800 with SprayJet makes it possible to apply emulsion and pave the asphalt at the same time. No other similar machines are currently in use in Brazil, so this sale has brought entirely new technology to the sector there.

Mattos & Travensollo carry out work on important Brazilian road

The public sector has been an important client for many Brazilian contractors. This is the case for Mattos & Travensollo Ltda., a company headquartered in the city of Duartina (SP), which has found a market niche for its business in government agencies. For the most part, it operates within a radius of 150 kilometers around Bauru, a city located in the Midwestern region of São Paulo state.

With seven years of experience in site leveling and paving, only 15% of Mattos & Travensollo clients come from the private sector. "A great percentage of our work orders come from city governments or from the Brazilian Association of Highway Departments," emphasized the company's administrative coordinator, Carlos Alberto Amaro Travensollo.

Technological resources and a well-prepared staff are their strategies to hang on to their market share and take advantage of the positive winds blowing in favor of the heavy construction segment. For Travensollo, the economy heating up and the country's constant need to invest in infrastructure are generating optimism regarding the creation of business in the coming years. "We want to grow along with the country," he concluded.

Recently, the contractor worked on the project to widen 100 kilometers of the Bauru/Marília highway, completed in March of 2010. They were responsible for a 15 kilometer stretch. This was an extremely significant project, since the roadway is a link connecting cities in the region and the capital city of São Paulo and the states of Mato Grosso and Paraná. "This project of great economic importance had been in the waiting for more than 15 years," the executive added. The undertaking relied on cutting edge technology in order to achieve high levels of excellence.

Mattos & Travensollo purchased two Hamm 3411P compactors from Ciber for use on the widening project. "A great many similar machines of this type are available, but this model in particular is a benchmark in terms of quality. I even visited the factory in Germany. Its responds very well in on the field."

Polienge Engenharia: a strong presence in Belém

Polienge Engenharia e Indústria Ltda., headquartered in the Brazilian city of Belém, is led by civil engineer Alex Dias Carvalho, and its main activities are site leveling and asphalt paving. Its construction work in the Belém Metropolitan Area , are focused in sanitation, site leveling and road paving.

In Paragominas, 350 kilometers away from Belém, they have a contract with the local City Hall and are carrying out site leveling and asphalting for practically the entire city, as well as stretches of nearby BR-316 (federal contracts).

The fact that Companhia Vale do Rio Doce has facilities in the region contributed to stepping up the contractor's business. It carries out repair and maintenance projects on all roads leading to Vale's bauxite mines.

Quality post-sales service is a competitive advantage in consumer relationships. For Polienge, it is an essential requirement when the time comes to choose their machinery suppliers. The company recently relied on Delta Máquinas (Ciber dealer in the region) to offer support for their model UADM14P asphalt plant acquired in 2000.

These services took place over the course of a year and the successful results strengthened the client's relationship with the authorized Ciber dealer. This work involved a partnership between both parties. "This loyalty has

allowed us to keep the machine in perfect working conditions. It reduces waste of raw materials, increases equipment availability and improves asphalt quality," explained Ulysses Vieira, service manager at Delta Máquinas. Their satisfaction with the service led them to purchase other pieces of Ciber equipment: one HD 14VT compactor and one AF 4500 paver.

Aspetro invests in complete line of technology

Specialized in road construction, maintenance and repair, Asfaltos y Petroleos S.A. (Aspetro) dedicates itself mainly to public services in Guatemala. The company bets on Wirtgen Group equipment since a long time, proving that having a complete line of machines provides more security and ease of use for clients: Aspetro relationship with the group is eight years in the making.

According to Edgar Fernández, from Aspetro, their choice of the products is due to their ideal combination of low-cost and high-quality. Fernández pointed out that the main advantage in choosing several different machines from the same supplier is the knowledge acquired by the company's professionals. "Operators and mechanics become familiar with equipment from the same brand.

Aspetro has a long list of Wirtgen Group equipments in operation. They have two milling machines (W100 and W1500), one Wirtgen WR2500 recycler, one Vögele Super 1800 paver, two Hamm compactors (HD90 and GRW15) and one Ciber UACF 17P Advanced asphalt plant. According to Fernandéz, the asphalt plants' main characteristic is their computerized control technology, " which makes them easier to use and ensures a high quality, uniform asphalt mixture."

With the **technology** it needed on hand, the Brazilian company **Unifresa** completed the **fine milling work** on an **Indy race** track in just **eight hours**

Milling in record time

Those who were at the inaugural Indy race event this March in the Brazilian city of São Paulo could never imagine the work that went into preparing the track to safely host the competition. The fine milling of the pavement on an important stretch of the street course, located in the Anhembi neighborhood, was placed under the responsibility of São Paulo company Unifresa, which was called on to solve track adherence problems. They met the goal successfully, relying on technology, agility and a staff focused on achieving excellence.

DERSA called on the company after the official training was postponed due to track quality complaints. Urgent track conditioning was needed and Unifresa had only eight hours to complete

the work. They finished in the early morning hours before the beginning of the race. The tight deadline was one of the main challenges to be overcome for the task to be completed with excellence.

A challenge Unifresa faced skillfully. The company is a member of the ANE Group, established in 1967, which carries out engineering work for the government. In the 1980s it introduced milling services on asphalt surfaces to Brazil. The group has grown significantly since then, enlarging its fleet of machinery to match.

Technological resources

For example, the Indy race track job relied on a Ciber manufactured W 1900 milling machine equipped with a fine milling drum. "That machine can cut up to 300 mm in a single pass when working with asphalt surfaces. With all of those characteristics, we had no doubts as to which model would live up to our expectations," stated Unifresa engineer and technical director Valmir Bonfim.

Bonfim explained that fine milling is a technique used to mill thin layers of surface. The race track job required milling of an average thickness of 5 millimeters. "We chose to use a 2 meter wide milling drum with 672 cutting tools. The procedure improves adherence by slightly roughening the track, making it more appropriate for the vehicles to drive on," he explained. The track is 535 meters long and 11.4 meters wide, covering a total area of 6,099 square meters. "The cutting tools held up very well to the concrete and there was no need to replace them mid-job, which had been one of our great concerns. We managed to finish the job in time for an Indy car test run scheduled for 4:30 a.m. The reported "dancing" of the cars on that straightaway was solved and the sporting event was able to go on as scheduled. "Roger Penske himself, owner of a renowned racing team, congratulated us, which was a source of great satisfaction for Unifresa."

Drum at work

As Bonfim emphasized, Unifresa's successful execution of the project had an important ally: The LA6X2 – an optional milling drum for the W1900 milling machine, made in Brazil by Ciber, and for the imported W100 and W100F models. "For smaller milling machines there are different drum choices for fine and micro fine milling, with even smaller distances between the cutting tools," emphasized Juliano Gewehr, from Ciber Application Engineering department. The spacing between each line of cutting tools on the LA6X2 is 6 mm and with each rotation 2 bits pass over the same point. "Because it removes a very thin layer and the bits' cutting lines are very close to one other, it is highly recommended for increasing track adherence," he pointed out.

Fine milling drum

São Paulo event brings together **important companies** from that state **to debate** aspects of pavement **recycling**

Recycling: a consolidated trend

Attended by engineer Walter Gruber, head of Wirtgen GmbH recycling department, the meeting was held in March at Reciclotec, Wirtgen Group dealer headquarters in São Paulo. Also present were: Aislan Buhler and Roberto Censoni (Contern Construções); Alexandre Machado Correa (Paulifresa Fresagem); Marcelo Curi and Ismael Mendes Alvim (Construtora Pavisan); Giancarlo Andreoli (CGS Rio Preto); Rodrigo Magalhães de Vasconcelos Barros (Copavel Consultoria); José Mario Chaves (OHL Brasil); Helio Cepolina and Valmir Bonfim (ANE Pavimentação); and Raphael Barbeto Thuler (Silthur Construtora).

Meeting participants socializing

According to those attending, the event was well-timed, in tune with the time the country's paving sector is

experiencing. As Alexandre Correa from Paulifresa puts it "Nowadays, pavement recycling in Brazil has become a reality and has a bright future." Among the many points discussed at the meeting was the environmental question, which has been increasing the momentum to use recycling as an alternative to improve project execution. "There are certain project matters and other definitions that oftentimes lead to a choice for milling, but that has been changing gradually over the past three years. The DNIT (National Department of Transportation Infrastructure) itself has been using recycling on its work sites," remembered Correa.

"Recycling is a trend that everybody is following. It began with the concessionaires and DER (Brazilian Association of Highway Departments) has become interested in this field due to the material waste," pointed out Giancarlo Andreoli, CGS Rio Preto owner-member.

Technical aspects

In addition to evaluating the potential for using recycling on Brazilian road work, participants discussed matters specifically related to using the technique. Andreoli emphasize the importance of perfecting the technique: "There are many companies out there recycling pavement without the necessary technical expertise. This tarnishes the image of recycling due to these companies' lack of specialization."

Antonio Monfrinatti, from Reciclotec, explained that what is most important for any job to go well is to first gather knowledge about the area to be worked: "One

Alexandre Machado Correa from Paulifresa

of the first rules for working with pavement recycling is that you need to know the pavement you´re working with, drilling sample wells to evaluate the material's integrity. That makes it possible to decide on the best solution for each project."

Among the subjects discussed was the depth of the cut and the size of the remaining layers necessary to ensure the work durability. According to the participants, no specific legal values have been determined, either in Brazil or abroad. In order to avoid crumbling, you first need to evaluate the remaining layer's strength, because it can appear solid when it's not.

Information Sharing

One of the event's other main objectives was to listen to reports about the Brazilian market from companies working in the field, as a way to add benefits to the products by sharing professionals and managers' practical experience. Participants reported difficulties in using recycling on the public works projects they bid on, resulting from budget limitations and the need to strictly follow the projects guidelines, which oftentimes do not include recycling. As a result of these situations, work needs to be done to pitch recycling to government planners as a way to encourage pavement recycling.

Alexandre Correa from Paulifresa believes that the future for the Brazilian market is bright: "There is certainly a movement to rebuild and repair existing highways in preparation for the upcoming elections. Nevertheless, we believe that Brazil has entered a rhythm and that there is no turning back. Everybody is talking about the World Cup, the Olympic Games, and these will involve Brazil in projects that go far beyond the elections or those events alone."

Walter Gruber (Wirtgen GmbH) presents equipment performance

Contractors produce made-to-order asphalt mixtures

Having a lean **logistical structure** is a trend for **paving work** being done **in Brazil**

The field of civil construction for infrastructure is adapting operating processes to its market's demands. According to 2009 CNT and Growth Acceleration Plan (PAC) reports, currently in Brazil a large portion of the paving service contracts require a lean logistical and operational structure from contractors. At least 8.4% of the country's roads are in urgent need of palliative services like pothole repairs and small roughness corrections. Additionally, 88.9% of the roads studied by CNT in 2009 were simple two lane roads, which make it difficult for contractors to lay down large quantities of asphalt per day, due to the need to not completely block the traffic. This forces them to work on only half the road and for limited periods. Another important factor is paving over basic sanitation and other urban construction services. This type of work is on the rise and accounts for R$ 239 billion of PAC 1 and R$ 389 billion (foreseen) for PAC 2.

Three contractors, Alvorada, SBS Engenharia and Dalfovo Construtora are examples of companies that have invested in a new structural format to serve small and medium sized projects. They identified the need to avoid investing in large equipment and complex, large scale facilities to facilitate mobility of their construction structure. Works such as highway maintenance, replacement of pavement on short milled stretches, building of stretches shorter than 50 km long, basic sanitation services (filling in excavations) and urban paving are just a few examples of what these companies carry out.

Under the supervision of the Construtora Alvorada the plant has already produced 2,000 tons

Alvorada contractor at work on road maintenance

Alvorada, a contractor located in the Brazilian city of Paranaíba, in the state of Mato Grosso do Sul, does a large part of its work conserving the state's highways. "We work on highways MS-240, MS-377 and MS-306," said Rafael Antônio Giroto, the technician responsible for Alvorada's work. We've had a Kompakt 500 asphalt plant working for the company for 50 days now. The plant began to work in March and so far has produced approximately 2,000 tons of asphalt for paving work.

Dalfovo contractor uses Kompakt 500 on important projects

SBS Engenharia opts for lean structure

SBS Engenharia, headquartered in Porto Alegre, Rio Grande do Sul, maintains a significant share of the market in southern Brazil, supplying infrastructure services. It opened its doors in the 1980s and is currently engaged in the market of concessions, small hydroelectric power plants and industrial construction. It has complete facilities in the Rio Grande do Sul (RS) cities of Santo Antônio da Patrulha, Capão do Leão, Caçapava do Sul and Cachoeirinha, as well as in the city of Paranaguá, in the state of Paraná. The company took part in the project to restore 50 kilometers of highway between the RS cities of Bagé and Livramento on BR-293. According to Rogério Gomes Costa Júnior, SBS' Maintenance Manager, the company needed a versatile, easy to operate industrial structure, which is why they chose a Kompakt 500 to produce the approximately 30,000 tons of mixture they needed for the work. Júnior also referred to the benefits of the machine's parts simplicity and the fact that Ciber's after-sales department provided such quality service, with true interaction taking place between technicians and the contractor. "Their technical support is very satisfactory. Their service department, together with their engineering, for the most part proved itself to be always proactive, providing unmatched service," Júnior pointed out.

Dalfovo Construtora innovates with their machine fleet

Dalfovo Construtora, a contractor headquartered in the Brazilian city of Caxias do Sul, works on important infrastructure projects. They have specialized in site leveling, civil construction and now in paving, and are active in the states of Rio Grande do Sul and Santa Catarina. The company is run by Executive Production Manager Jones Antônio Dalfovo, Administrative Manager Juarez Alex Dalfovo, General-Director Erineu Dalfovo and Financial Manager Jairo Miguel Dalfovo.

According to Juarez Dalfovo, for the paving work done on the RS-232 project and on the building of South America's only semi-trailer truck test track, the contractor would not be able to invest in a large piece of equipment to carry out the work, and would also have been faced with less than hoped for financial results if they had bought the asphalt mixture.

The Kompakt 500 produced the asphalt mixture for the Binder layer and the driving surface of the test grounds for the nine companies Caxias do Sul based Randon Group. An area of 87 hectares was transformed into a technology center, with a series of tracks used to test high and low speed driving conditions, off-roading, and conduct noise measurements and friction coefficiency tests, among others.

The same machine is being used to build a 50 km stretch of highway RS-322, a project that is being managed by Camargo Corrêa.

Flexibility and high technology

Positive evaluations by contractors prove its flexibility and excellent cost-benefit ratio. The environmental gains in terms of reduced fumes and pollution below the standards currently in force also make it possible to locate facilities near cities. Not only that, but it is also possible to produce everything from fine mixtures like sand asphalt to mixtures commonly used in Brazil for highway conservation and maintenance. For these and other reasons the equipment is gaining space outside of Brazil. Paraguay is the first country to use asphalt produced by a Kompakt 500 asphalt plant, which will also soon be arriving in South Africa, the Republic of the Congo and Argelia.

AIRPORTSUNDERCONSTRUCTION

African contractors working on airport terminals

Two **African companies**, **Sanyati Constructions** and **Stefanutti Stocks Holdings Limited**, are **operating** on **airport construction** projects in **South Africa**

World aviation has taken off. For a variety of reasons. Flying is no longer seen as a choice for the few. In addition to its importance for domestic and business trips, this form of transportation is also indispensable for commercial cargo, as well as being an important port of entry for global communications.

Aware of the vital importance of air travel in the process of transporting people and delivering orders, airports all over the world are looking to modernize, improve infrastructure and comply with strict standards regarding physical specifications, runway configurations, aircraft taxiing areas and other aspects that are essential for an airport's effective and full operation. Two South African companies, Sanyati Constructions and Stefanutti Stocks Holdings Limited are at work on significant projects in this area.

Undertakings in Durban

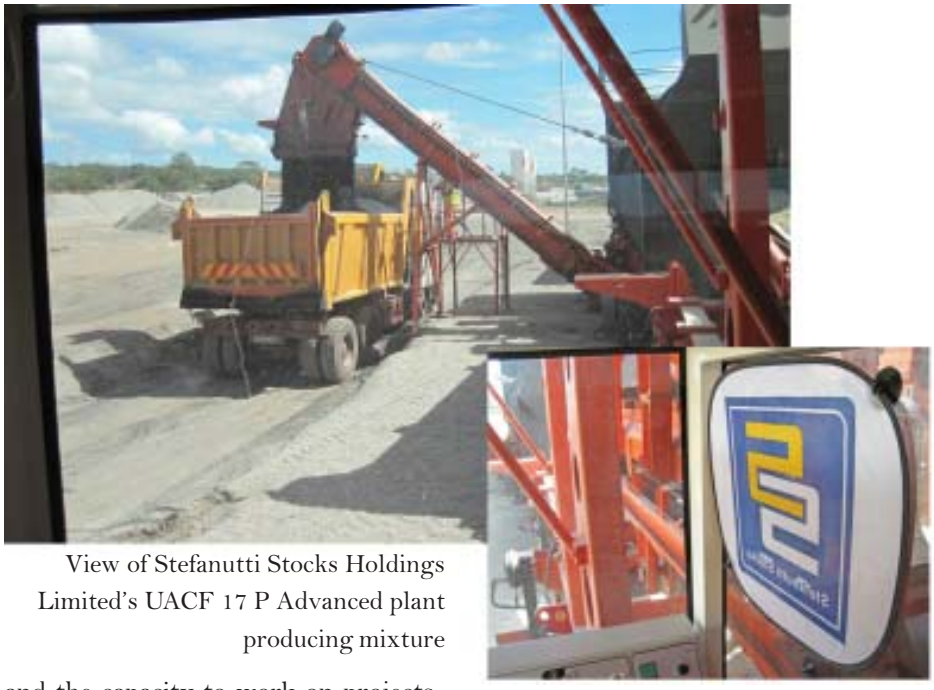
African nations have been investing heavily to step up their airport infrastructure, in this way encouraging economic activities. On the African continent it is not different, especially as the host for the 2010 World Cup. This sporting event ended up leading to the structural modernization of several airports. This was the case for King Shaka International Airport in Durban, South Africa's third largest city, which underwent a revitalization that relied on the support of Sanyati Constructions and a Vögele Super 1800-2 paver and three Hamm compactors (HD 90, GRW 18 and HW 90).

Construction Work in Swaziland

The Sikhuphe International Airport in Swaziland has been added to the list as well. Located in the small Southern African country of Swaziland, it came off the drawing board to make the arrival of

Ciber Equipment at work in Durban

international flights to the country feasible. Previously these flights had only landed in South Africa. The increasing of local tourism figures among the most important immediate returns on the investment. According to Robert Turner, Stefanutti Stocks Holdings Limited's paving manager, the work being done by the multidisciplinary engineering and construction corporation will have a great regional impact, because it will make it possible to increase the capacity to import goods to the Swaziland region. The contractor has more than 20 years of experience in the civil engineering segment, with a yearly business volume greater than R$ 6 billion, more than 9,000 employees and the capacity to work on projects for a variety of markets. "We work in South Africa and throughout Sub-Saharan Africa, including Angola, Botswana, Burkina Faso, Republic of the Congo, Guinea-Conakry, Lesotho, Mali, Mozambique, Republic of Niger, Nigeria, Swaziland, Tanzania, Zambia and Zimbabwe. In these countries, our services focus on highways and site leveling, properties and concessions, mining, mechanics, electricity and instrumentation. We are also active in the Middle East," Turner explained. Their clients include governments, quasi-governmental entities and local autonomous agencies, industry leaders, business groups, financial institutions and developers. Technology is an indispensable factor for Stefanutti Stocks Holdings Limited when carrying out their undertakings. Their fleet includes Wirtgen Group equipment like milling machines, pavers and compaction rollers. For the Sikhuphe International Airport



View of Stefanutti Stocks Holdings Limited's UACF 17 P Advanced plant producing mixture

Operating at full capacity: Kukhanya Pty's UACF 17 P Advanced plant at the Swaziland Airport

Work at Swaziland airport

in Swaziland, due to the restrictions and extremely strict requirements for projects of this kind the contractor decided to use a UACF 17 P2 Advanced asphalt plant,
"It allowed us to achieve the necessary 100% quality control, in addition to high production rates," he emphasized.

On both jobs, explained Daniel Correa da Silva, a technician for Wirtgen South Africa – the Wirtgen Group subsidiary that sells and provides support to the company's entire line of equipment for the South African market – unique techniques were used throughout the African undertakings towards achieving durability, lowering costs and increasing reliability. "At the Durban airport, the Stone Mastic Asphalt (SMA) method was used, a modified asphalt formula that includes wax, latex and paper pulp fibers. For its part, at the Swaziland airport two modified types of asphalt were used. The first is called AE2 and includes latex in its formula, while the second is called the Rubber mix, including powder rubber and heated to more than 200 degrees Celsius to homogenize the product before producing the AC (Asphalt Cement)," he described.

Vögele 1603-2 and three Hamm compactors on the Swaziland airport runway

Improvements to Southern Brazilian airport

Salgado Filho International Airport in the city of Porto Alegre, capital of the Brazilian state of Rio Grande do Sul, has been working on a series of projects to meet growing passenger demands. From January to December of 2009, more than 5.6 million people used the airport for both domestic and international trips, and during the first half of the year passenger traffic grew 5% in comparison with the same period in 2008.

Renovations rely on support from Ciber equipment Last year, a paver equipped with electronic pavement grading control that lends greater precision to the work and two milling machines with technology to adjust milling depth by the millimeter, worked on the project to widen the airport's main runway by eight meters, from 42 meters to 50 meters. The improvements aimed to regularize the surface.

The investments did not stop there. In 2010, Infraero hired Equipav S.A. – Pavimentação Engenharia e Comércio – for resurfacing, including longitudinal and transversal corrections of the pavement, with the aim to provide greater comfort during aircraft taxiing. The new initiative foresees a lengthening of the runway by 920 meters to the East, increasing its current 2,280 meters to 3,200 meters long. This runway will grow from 42 to 45 meters wide. Between April and May, the São Paulo based company Unifresa carried out a fine milling process to recompose the asphalt with a Wirtgen W1900 milling machine equipped with a FB 2000 LA 6x2 drum with 672 cutting tools and a Multiplex 6 sensor leveling system. "The idea was to regularize the runway's longitudinal profile for later asphalt resurfacing," explained Valmir Bonfim, director of the Ane Group, of which Unifresa is a part. According to Bonfim, the use of the fine milling drum was an Infraero requirement due to job specifications.

W 1900 carries out fine milling at Porto Alegre airport

DNIT: $ 8.4 billion budget for 2010

All across **Brazil**, countless **road projects** are being (and will be) **carried out in 2010**. Evidence that the country is on its **way towards** road structure development

With the passing of the international financial crisis' uncertain times, positive signs point towards a return to robust industrial and retail activity. According to economics professor Alcides Leite from Trevisan Business School, one segment in particular should stand out from the rest: civil construction. In other words, construction projects will not be lacking to accompany the positive post-crisis period. This is because development requires investments capable of helping to country take giant steps forward.

In this sense, Brazil is already dedicating itself to overcoming structural obstacles. Regarding Brazilian roads, the Federal Government has destined sizeable funds to get them into appropriate conditions for traffic. According to the National Department of Transportation Infrastructure (DNIT), Brazil's total budget for 2010 is R$ 8.4 billion for undertakings on North-South roadways alone. That includes on average 4,000 kilometers of construction, 1,000 for widening projects and 53,000 kilometers of maintenance.

Pugás/Dnit

Hideraldo Caron, do Dnit

In an interview with "Usina de Noticias" magazine, DNIT's Director of Road Infrastructure Hideraldo Luiz Caron stated that the number of kilometers under construction is huge and aims towards improving traffic conditions both for passenger cars and those responsible for

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Number 01 – Usina de Notícias 21

MIXER BLADE CONFIGURATION

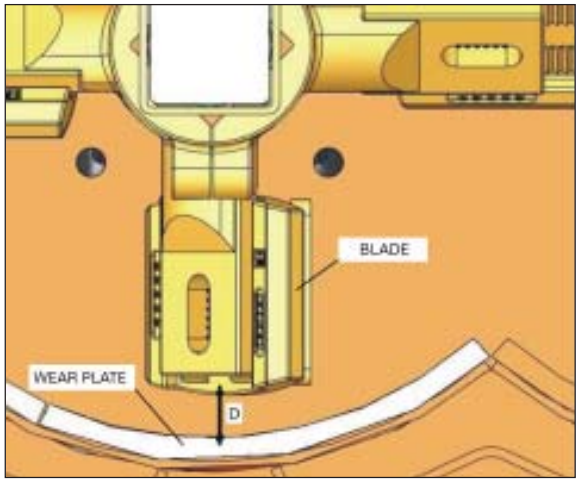
The challenges faced by paving companies increase everyday due to market demands for special mixtures. The external pug-mill mixer's main advantage is the fact that the mixing takes place outside the drum dryer, preserving the binding agent's physical-chemical characteristics. Ensuring this advantage depends on correct adjustment of the system. Not only that, but it is worth pointing out the importance of using Ciber original parts, since they are designed based on analysis of the materials and their employability. This item is carefully observed by Ciber engineering department, which seeks to design products with a great cost-benefit ratio.

Here are two important tips that will help you in order to make the best use of external mixing:

1 – MIXING BLADE DISTANCE ADJUSTMENT

Mixing in the Pug Mill is different from the rolling mix system done in the drum dryer. The Pug Mill moves all of the material in a more intense way inside the mixer, leading to more homogenous distribution of the binding agent. One detail to be observed that affects the efficiency of moving the material inside the mixer is the distance between the mixing blade and the mixer's bottom plate, known as the wear plate. One procedure you can be carry out to improve homogenization of the material is to adjust this distance.

Ciber recommends that the distance between the end of the blade and the mixer's wear plate be 1.5x the size of the largest rock used in the mixture.

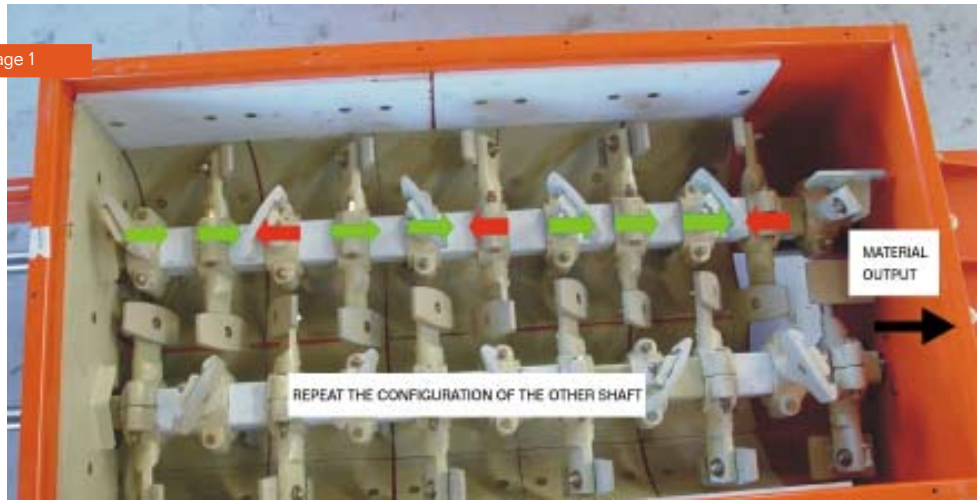


D – Distance between blade and mixer bottom
d – diameter of largest rock
D = 1.5 x d

2 - MIXING TIME ADJUSTMENT

The Pug Mill mixers used by Ciber counterflow asphalt plants make it possible to adjust how long the material spends inside the mixer. Since the aggregates and the binding agent enter the mixer from one side and the processed asphalt mixture will exit from the other, in addition to carrying out the mixing of the materials within the mixer the blades are also positioned in such a way as to drive the asphalt mixture from the mixer in the transport zone. If all the blades are positioned to drive the material out, then we will have the minimum time that the material will stay within the mixer. The mixer's sets of arms/blades work in pairs, so in order to increase the time the mixture stays in the mixture all you need to do is place one or more pairs of blades in a direction that will oppose the mixture's expulsion from the mixer, which will have a retarding effect, retaining the mixture inside the mixer for longer and increasing the mixing time.
Below, see the configuration for the UACF 19 P Advanced mixer as it leaves the factory:

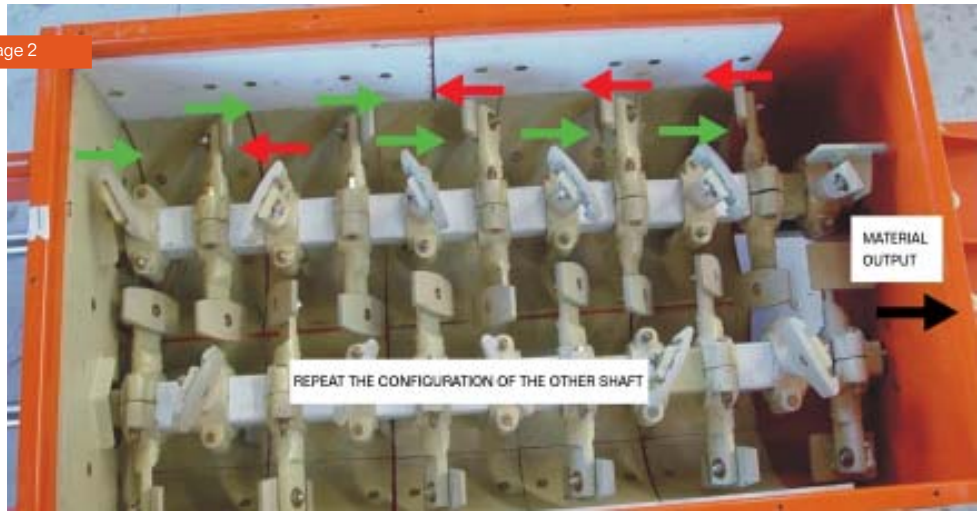
Image 1



Factory configuration – UACF 19 - 30% to retain and 70% for expulsion

In order to make the alteration it is possible to invert the position of the pairs of the arm/blade sets, passing each pair to the opposing shaft, placing the blade in an inverted position in relation to its previous position.

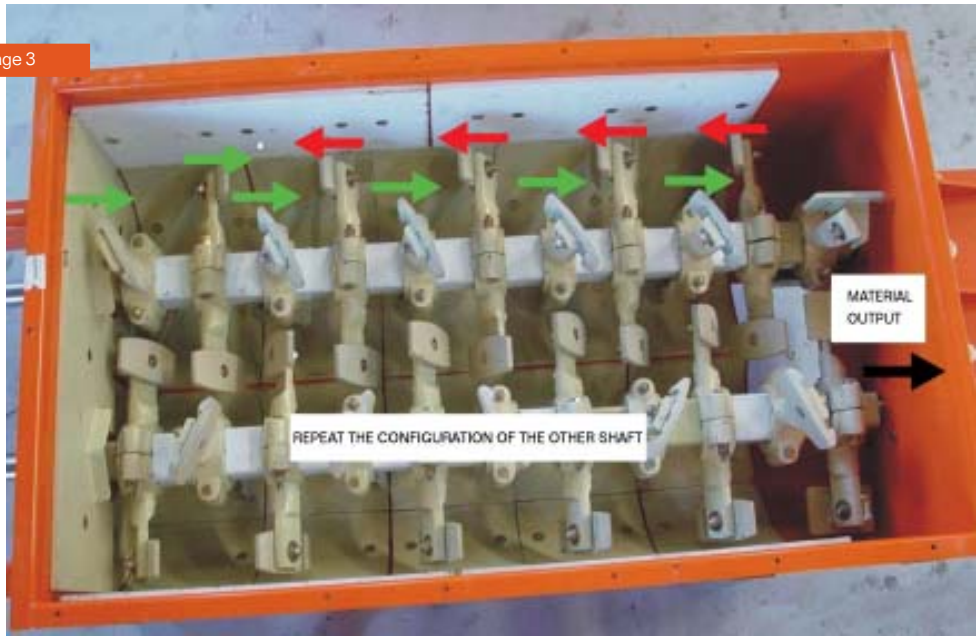
Image 2



Suggestion 1: Configuration 40% to Retain and 60% to Expel

Image 3

Suggestion 2 more aggressive: Configure 40% to Retain and 60% to Expel



Below, see the procedures to configure the mixer to obtain more time retaining the mixture:

1st Remove one pair of arms from a shaft, the one you want to invert

Image 4

2nd Remove from the other shaft, in the same position of the one removed previously, the pair of arms and transfer this assembly to the open space on the other side, turning it around 180°

Image 5

3rd Check to make sure the blade's wearing side is turned in the direction of material retention

Image 6

4th Carry out the same procedure on the other shaft, never forgetting to turn the assembly around 180° when transferring it to the other side

Image 7

Important: Never exceed the number of inversions recommended by this procedure. If you have any questions, contact the Ciber Dealer in your region.

transporting cargo. In addition to contributing to driver safety, they also lead to improved flow of production. The second stage of the Growth Acceleration Plan (PAC-2), for example, will have nearly R$ 3 billion available to develop agricultural infrastructure and logistics – one of the country's most essential production chain links. "Beyond the projects already underway, DNIT is also in charge of countless studies in progress to include intermodality, with an increase in transportation by rail and water," the agency informed.

Improvements in Northeastern Brazil

There are currently construction sites located in practically every Brazilian region. That is the case with the Northeast, where important undertakings are currently in progress. Construction on BR-405 and BR-426 is in its advanced stage. Both highways cross Northeastern Brazil. DNIT is executing the services on two segments located in the *Alto Sertão* and the *Vale do Piancó*.

The local population has been waiting for these stretches to be paved for almost 40 years now.

On BR-405, the department is investing R$ 11 million and expects work to be completed by December of this year. By February, 80% of the site leveling was finished and 10.6 kilometers of the sub-base were ready, as well as all the civil engineering work. The services are being carried out between the border of the state of Rio Grande do Norte and the BR-230 junction, on the 18 kilometer segment between the cities of São João do Rio do Peixe (km 36.5) and Marizópolis (km 54.5). It is known as the "Salt Road" because it is the shipping route for most of the salt produced in the cities of Mossoró, Areia Branca and Macau (RGN).

On BR-426, work on paving a 29.9 kilometer stretch between the BR-361 junction in Piancó (km 65.6) and the PB-356 junction in Nova Olinda (km 95.5) is receiving investments to the order of R$ 13 million. Part of the site leveling has already been finished. Paving will bring advantages to many cities in the region, facilitating the flow of agribusiness products and also improving the link between Paraíba and Pernambuco, by way of the Paraiban city of Princesa Isabel.

There are an average 4,000 kilometers under construction, 2,000 being widened and 53,000 kilometers to undergo maintenance.

Construction work in Southeastern Brazil

For its part, the Brazilian Midwest will benefit from DNIT's signing of contracts worth R$ 182 million (in January) for widening BR-365 in the state of Minas Gerais between Uberlândia and Monte Alegre in the *Triángulo Mineiro* region, and to cross the city of Patos de Minas in the *Alto Paranaíba* region. Deals were closed as well to restore another 164 kilometer stretch of BR-365 and 50 kilometers of BR-153 in the state of Minas Gerais. DNIT's road infrastructure director Hideraldo Caron, emphasized that what is required of companies they hire is to get right to work. "Aside from bad weather, there are no other elements that can cause problems at the start of a job," he said.

Projects in Southern Brazil

In Rio Grande do Sul, the bureaucratic processes are already underway for work on BR-386, one of the projects included in the federal Growth Acceleration Plan (PAC). This work aims to adapt the road's capacity to the higher flow of heavy vehicles that came as a result of the constant increase in agricultural and industrial production in Rio Grande do Sul's Northern, Northwestern, Missions, Alto do Jacuí, Vale do Rio Pardo and Vale do Taquari regions. 34 kilometers will be widened between the cities of Tabaí and Estrela (RS), an undertaking estimate to cost R$ 151 million. That highway is the most important link between the capital city of Porto Alegre and the state's Northern region.


3411
HAMM

São Paulo: one big construction site

Brazilian contractors **JN Terraplanagem** e **Pavimentação**, **Cetenco Engenharia**, **CGS Rio Preto** and **Soebe** are all at work on road projects in **different regions** of the **state of São Paulo**

The state of São Paulo is South America's third most populated administrative unit. It is a true economic powerhouse and its more than 40 million inhabitants and 645 cities and towns are of vital importance to the nation. The state is home to several civil construction companies, like JN Terraplanagem e Pavimentação, Cetenco Engenharia, CGS Rio Preto and Soebe Construção e Pavimentação, as it is a storehouse for a great many works all across the region.

Investments in infrastructure appear to be an important factor towards its economic development. A strategy to stay on equal footing with the other Brazilian states. According to Paulo Sérgio Sanches, purchasing director at JN Terraplanagem e Pavimentação, a contractor located in the Northeastern São Paulo city of Birigui, the national market is on the upturn, in both the private and public realms. This fact has led to positive results for the company. "Our main clients are Alcohol and Sugar Plants, City Halls, the São Paulo State Highway Department and private industry," explained Sanches. Among its most recent projects are improvements and paving work on the 14.5 kilometer Penitentiary Complex Stretch of the Vicinal/Lavínia highway in the Tabajara neighborhood, in the city of Lavínia (SP). "This work includes services like site leveling, asphalt paving, civil engineering work, currents and drainage, signage, safety aspects and environmental protection services, all being done currently," he said. The company has invested in technology to meet demands for quality, leading them to add internationally recognized equipment to their fleet of machinery. According to Sanches, that was why invested in an AF 4000 paver. "It

At Bauma: Emil Beyruti and Marco Antonio Beyruti (Soebe) and Luis Carlos Gasparin (Reciclotec)

operates on a wide variety of jobs and its performance can be described as excellent," he stated.

Fleet renovation

The optimistic scenario and the constant need to improve its road network have made the so-called "*terra da garoa*" (Land of the Drizzle) into a port of entry for a large population of cutting edge machines. For example, Cetenco Engenharia S.A., takes great care in keeping its fleet up-to-date in order to comply with the quality standards demanded by the contracts signed with a wide variety of segments like energy, industry, sanitation and transportation. Located in the city of São Paulo, it has been in operation since the mid-1930s in Brazil and abroad, becoming a leader in outstanding regional and national undertakings, such as the work carried out at Congonhas Airport and on the Paulo Afonso and Itaipu hydroelectric dams. It is currently working on railway and road projects in Southeastern, Midwestern and Northern Brazil. "Always keenly aware of the trends being announced at national and international events, Cetenco seeks to add every possible benefit to its civil construction services. As part of this search for perfection, recently the company acquired Ciber products like a paver and Hamm compactors," informed the contractor's Engineering department.

In the same way, CGS Rio Preto, headquartered in the city of Bauru, has been improving its equipment lineup in order to add value to its production processes and construction work. This is what led to them to purchase a UACF 17P-2 plant for use on construction sites. The contractor is active paving and leveling sites on São Paulo's roads and for concessionaires, focusing on the state's rural areas. Most of the projects come from the State Highway Department (DER). Giancarlo Andreoli, owner-member of CGS, foresees increasing rates of growth for 2010. This is because a number of DER projects have opened up since the year began. "There are already projects and calls for tender for the plan to repair state highways," he stressed.

Soebe Construção e Pavimentação, from the city of Caieras, has also stood out on São Paulo soil. One of its most recent jobs was to reformulate the Indy race track. "To carry out that job, we made use of electronic equipment with lasers and sensors," the company explained, emphasizing that Vögele pavers and Hamm compactors purchased from Ciber were used.

New Wirtgen Group Dealer for the Mexican Market

Construmac S.A. takes over sales activities in Mexico for **Wirtgen**, **Vögele**, **Hamm** and **Ciber** brand products

On April 1st, the Wirtgen Group named Construmac S.A. as their exclusive dealer on Mexican soil. The company is now officially responsible for sales and service for the group's clients in that country. Now representing the Wirtgen, Vögele, Hamm and Ciber brands, Construmac, a well established family business in Mexico, on the market for 34 years and well positioned in the construction and mining sectors, will now be offering high quality sales and after-sales services.

The Mexican market is very important for Wirtgen in North America, since it has been seen to have great growth potential in all areas of the group business activities. "We will continue our strong commitment to the Mexican market with Construmac in order to serve our customers even more professional in sales and service for our brands and to strengthen the position of our market leading 'Road and Mineral Technologies" in this very important market. This means also that we do not only have the intention to increase the market shares for Wirtgen, Vögele, Hamm and Ciber which focus on road building but that we also have the firm intention to develop stronger our potential for the mining and mineral technologies. Construmac has proven in the past that they are recognized in the industry as a highly professional partner for road building and mining equipment and we are very proud to have them on board now for the Mexican market," stated Wirtgen Group president Jürgen Wirtgen.

Construmac Staff

The Area Sales manager of Wirtgen GmbH, Andreas Marquardt, in addition to emphasizing Construmac's family-run aspect, said that "we are certain to considerably increase our market share for all of Wirtgen Group brands with this solid foundation. Our short term goal, for the next three or four years, is to become the Mexican market leader for all of Wirtgen product lines."

Asphalt nucleus used on dam: Camargo Corrêa bringing new technology to Brazil

Total **investments** in the **project** add up to more than **R$ 2 billion** and will create the **ability** to **generate** 25% of the **energy consumed** by the state of **Santa Catarina** or 18% by **Rio Grande do Sul**

With its first generating unit set to begin operating in August of 2010, the Chapecó Falls Hydroelectric Plant located in the Southern Brazilian state of Santa Catarina is an innovative project that is being developed based on top quality procedures. This project is unique in South America due to its use of an European method of creating the impermeable rockfill nucleus out of asphalt, replacing the conventional clay method.

This work is being supervised by Camargo Corrêa, one of Brazil's largest heavy construction companies. With its 70 year

history, the company has been responsible for the country's main infrastructure projects, such as the Itaipu and Tucurui hydroelectric plants, the São Paulo Subway, Cumbica airport and the Rio-Niterói Bridge, among others. It has worked on more than 500 projects over the course of its history and is also a significant international player in both Latin America and Africa. Currently it is active in the power and electromechanical assembly segments, the oil and gas industry, sanitation projects, roads, public transportation, ports and airports.

Unique methodology

The European methodology was the solution they discovered to overcome the physical and climate difficulties and comply with a tight timeline. "Work on the Chapecó Falls Hydroelectric Plant began in December of 2006. It's last generating unit should begin operating by the beginning of 2011," explained Renato Penteado, Camargo Corrêa's Project Superintendent.

Even during the dry period during the Brazilian summer, the Southern Region is exposed to strong rains. With its strict deadlines, the job could not be subjected to the unpredictable drying of the clay material or possible rework. To top it off, the region does not have its own source of clay, so use of that material would have required supply and transport from other areas of the state.

"Using asphalt made it possible for us to apply two to three 25 cm layers every day, rain or shine. On rainy days, we only partially interrupted the work while it was raining – work was immediately resumed when the rain stopped," said Penteado.

The Chapecó hydroelectric project will generate enough capacity to meet 25% of Santa Catarina's or 18% of Rio Grande

Camargo Corrêa chose plant to meet project specifications

UAB 18 E Advanced makes it possible to produce any kind of asphalt

do Sul's energy consumption, which corresponds to 855MW. By the beginning of the year, 80% of the construction work had been carried out. Total investments for the project add up to more than R$ 2 billion. In all, construction on the plant will last 50 months.

Chapecó Falls is one of Brazil's largest construction projects and is a priority for the Federal Government's Growth Acceleration Project (PAC).

Appropriate Technology

A UAB 18 E Advanced gravimetric asphalt plant produced by Ciber Equipamentos Rodoviários is being used on the project, which is the first experiment of its kind in Brazil. The technology consists of laying down three compacted asphalt layers of 20 cm each per day. "The project specifications required us to use this kind of high performance plant, which produces a greatly superior asphalt mix. To this end, the final dosing system, which makes it possible to produce any type of mixture, such as SMA, mixes with fibers and rubber-asphalt, was a determining factor in our decision to buy this kind of plant," explained sales director Clauci Mortari.

The plant is stationary and meets the demands for production of mixes from permanent locations and is ideal for contractors that have high demands for quality control, with strict product specifications. "This project requires a production rate of 300t/day and one of the project's requirements is for a minimal quantity of voids in the asphalt mix, due to the strict requirement for weatherproofing the dam's rockfill nucleus, in order to achieve efficient weatherproofing," added the director.

UAB 18 E Advanced control panel

UAB 18 E Advanced Technical Specifications	
Production capacity:	100-140t/h
Number of bins:	4 (of 7,2 cubic meters each one)
Mixer type:	external pug-mill with twin-shaft
Quantity of sieves:	4 (cada una con su propio silo caliente)
Burner:	11.6 MW/ 10,000 kcal/h
Dryer:	diameter of 1900 mm (75") x 7500 mm (295")
Mobility:	stationary (S)

Chapecó Falls Plant Characteristics	
River:	Uruguai
Nameplate Output:	55 MW
Ensured Energy:	average 432 MW
Generating units:	4
Turbines:	Francis type, 214 MW each
Dam:	
Asphalt rockfill nucleus	
48 meters tall	
598 meters long	
Spillway:	15 18.70 x 20.60 meter gates
Maximum flow for project:	62,190 m3/s (the maximum flow of Itaipu Hydroelectric Dam is 62,200 m3/s)

High HMAC percentage

Another project required characteristic of the mixture being supplied by the UAB 18 E Advanced is the need for a high quantity of HMAC, to the order of 6.6% of the asphalt mixture. The high HMAC percentage is due to the need to reduce voids in the mix. For this reason, the mix uses a large quantity of fine materials, both the rock fines that are recovered by the bag filter and returned to the dosing and mixing process and the dolomite limestone, which comes from a bin external to the plant and that also undergoes a dosing and mixing process. The quantity of fines and fillers in the asphalt mix is very high because of the requirement for very few voids in the asphalt mix. Both the filler and the dolomite limestone were chosen because of the adhesivity needed in the asphalt mix and the heavy specific weight of this limestone, which can reach 2.4 t/m^3.

Aracaju invests in paving work

The City Works and Urbanization Company (EMURB) has **expanded** the **production capacity** of its **paving** projects, making the city of **Aracaju** an point-of-reference for **infrastructure** investments

The City Hall of Aracaju, located in the state of Sergipe, is constantly investing in structural construction work. It can be said that Aracaju is a model city in terms of its concern with infrastructure development projects, betting on pavement improvement and construction. They are constantly working to provide the 600,000 inhabitants excellence in terms of structure. The City Works and Urbanization Company (EMURB) is in charge of this undertaking. There are many urban intervention initiatives underway in the capital of Sergipe, with the objective to valorize it and contribute to the local economy. To this end, there has been a need to expand and modernize its fleet of machines to meet growing demands.

To reinforce its fleet, EMURB acquired a UACF 17 P Advanced from Ciber. The equipment will be used on paving work on the city's streets.

According to EMURB's operational director Sandoval Romão Batista, the plant was technically delivered and is capable of producing 120 tons of Mastic Asphalt Concrete to pave the city's streets and avenues faster, causing fewer traffic disruptions.

Batista: new plant purchased to meet increased infrastructure project demands

The new machine will not replace the one that has been at work for the company for 25 years. That one will continue carrying out complementary work like filling potholes. The new, more modern model includes feed bins for aggregates like sand and gravel, adapted filters and helps preserve the environment. "The feed bin's filter includes a pollution controller. All our work complies with environment legislation," he stated.

According to Raimundo Machado, from Requimaq, Ciber's representative in the state of Sergipe, Aracaju currently has one of the country's largest Mastic Asphalt Concrete production facilities: two asphalt plants (UA26080TH and UACF17P1) and three master tanks (TM50P and TM303020P), as well as a PMF plant and a cone crusher unit. "Their example should be seen and followed by other administrators who want the best for their administrations and cities," he emphasized.

Delta Construção and **Sobrenco** are part of the **Nova Tietê**, a consortium operating on a **12 kilometer** stretch of the **new center lane**

Nova Tietê consortium works on project to alleviate São Paulo traffic jams

The Marginal Tietê Expressway located in the state of São Paulo is undergoing an improvement project that aims to alleviate traffic on one of the world's busiest roads. Every day, 6% of the country's cargo travels down its lanes. By the end of the year additional lanes will be ready – 23 kilometers each – along with three new bridges and three overpasses. The project relies on services provided by Delta Construção and Sobrenco, both members of the Nova Tietê consortium.

The project for the Nova Marginal is the result of an agreement between the state government and City Hall, leaving it up to DERSA to carry out the work on the second 15 km stretch and to supervise and

Stretch of Marginal Tietê Expressway under construction

José Cordeiro/Divulgação

build the other two stretches. It even includes the installation of a 22 kilometer long bike trail along the edge of the Via Parquet near Ayrton Senna Road, between the Tietê Ecological Park and the São Paulo-Itaquaquecetuba border.

It is estimated that the undertaking will cost approximately R$ 1.3 billion.

The gains from the expansion are immeasurable. Among the main benefits are 33% reductions in traffic congestion and travel times, as well as reductions in fuel consumption and pollution emissions, approximately R$ 200 million of which will be invested by the consortiums that administer the Anhanguera, Bandeirantes, Ayrton Senna and Carvalho Pinto roads. Another advantage for the people of São Paulo will be the environmental compensation work, which includes the planting of 150,000 new trees on the roadway itself and in surrounding neighborhoods. According to the government of São Paulo, the initiative will contribute to reducing global warming damage.

The Nova Tietê consortium took on responsibility for Lot 2 on the stretch located between Bandeiras Bridge and Piqueri Park.

Delta Construção and Sobrenco are working on the new 12 kilometer long center lane – 6 kilometers on each side. In all, the project involves 46 kilometers in both directions, divided into three stretches. These companies are also at work on the Bandeiras, Cruzeiro do Sul and Tatuapé complexes (a set of bridges and overpasses designed to facilitate entrance and exit from the Marginal Tietê Expressway from the new center lane), which should be ready in October, 2010. "The building methods for the projects were established as a result of the attributes and dimensions of the civil engineering work, local conditioning factors, subsoil geotechnical characteristics and the current usage and occupation conditions of the soil in terms of existing traffic, abutting structures and interference with the networks and systems of public service concessionaires," informed Nova Tietê's press agent.

Ferdinando Quadros/divulgação

Women at the command

In order to operate the heavy machinery in a field usually dominated by men, women were recruited by the consortium. Overalls, helmets, earrings and discrete lipstick. The typical uniforms for those working in civil construction, combined with those add-ons characteristic of feminine vanity are being seen on the construction site.

In command of the milling machine is Elisama Antunes Moraes, mother of four, who found in the activity a way to ensure a better future for her children. Her interest in the profession began on account of her ex-husband, and she earns nothing but praise from her male peers. "Their performance is excellent. The women are very focused on quality production. You rarely see the need for rework from a women's team. Not only that, but they are more careful with the machines. They truly care for the equipment," stated mechanical engineer Ferdinando Quadros, responsible for equipment and operators.

Three pieces of Ciber equipment at work on the Nova Marginal: two Hamm compactors (one HD 90 and one GRW18) and one Wirtgen W 1000 L cold milling machine.

Construmil faces challenges in the Amazon region

Brazilian contractor, **based in the state of Goiás**, operates in **Northern**, **Northeastern** and **Midwestern Brazil**. A project of great **economic impact** is being supervised by the **company** in **Acre**

Each part of Brazil has its peculiarities, unique characteristics that influence how infrastructure projects are carried out. In order to overcome climatic and geographic difficulties, contractors make use of technology. This is the case with Construmil, responsible for important undertakings in the Amazon region. Headquartered in the city of Goiânia (Brazilian Midwest), the company has been working in civil construction since 1988, mainly in the states of Maranhão, Piauí, Distrito Federal, Goiás and Acre. It is now, without a doubt, a specialist in its field of operation. But the company's beginning, in 1972, was quite unique. It took its first steps in Brasília in the cargo transportation segment. Nevertheless, the need to diversify and an innovative spirit led Construmil to enter the road engineering market. This change brought good results.

Most of the company's clients are from the public sector, in the federal realm. The project on BR-346 in the state of Acre consists is one of the great challenges the company is facing. Begun in 2007, the project is scheduled for completion next year. It includes 69 kilometers of works, with a volume of 5 million cubic meters of earth. The contractor is responsible for Lot 6, located between the cities of Feijó and Sena Madureira. So far, they have completed 18 kilometers of Mastic Asphalt Concrete, 35 kilometers of site leveling and 80% of the civil engineering work.

The project is part of a complex of infrastructure work promoted by the Federal Government and delegated by the National Department of Transportation Infrastructure (DNIT). Its importance lies in the fact that it will provide national integration, since BR-346 extends all the way to the Peruvian border and connects the capital of Acre, Rio Branco, to the Vale do Juruá region – formed by the union of two Acrean micro-regions: Cruzeiro do Sul and Tarauacá. Without highways, the people there spend most of the year in isolation. The project will bring great benefits. In order to get an idea of the social and economic problem set faced by the cities

in the region, the highway closes in October and only opens again in June, making circulation of inhabitants and goods difficult. This factor is responsible for the high cost of food and medicine. "This project will contribute to integrating Brazil with other South American countries," stated Construmil owner-member Francisco José de Oliveira.

Rough weather

The contractor faces Acre's challenging climate variations and geographic characteristics every day. They overcome these obstacles by using their broad experience operating in Acre. "We have been operating on road stretches in Acre for ten years now," Oliveira explained. The Amazon region is one of the world's rainiest places, with more than 2,800 mm of precipitation per year. Add those difficulties to others caused by the poorly structured soil, the so-called Tabatinga (bare, perishable clay) and complex logistics. Practically all traffic is done by ferry.

Technology in action

Rain or shine, contracts need to be complied with. Technology is one of the main allies for services to be carried out successfully. For its construction site, Construmil takes top-of-the-line equipment and works hard to stay on top of market trends. "I visited Bauma [trade show] and saw the Wirtgen Group products. We purchased a W 1900 from Ciber and have already used it on several jobs. For example, we carried out 200 kilometers of milling with it on BR-153, on the stretch from Maranhão to Imperatriz," said Oliveira.

Left to right: Walter Neto (Weco), Francisco Oliveira and Mauro Oliveira (Construmil) and Walter Caldas (Weco)

Ditranserva updates Peruvian market

Investing in the **renovation** of its **fleet of machines**, **Ditranserva** is bringing **technology** to the **capital of Peru**

The Peruvian company Ditranserva, which is active in civil construction, especially in paving, asphalt production and equipment rental, has been investing in renovating its fleet of machinery. With the directive to offer cutting edge products and services, the company seeks to respect the environment and serves as an example for the region's industry, being a technology standout in Peru's capital city of Lima. Their investment in personnel development is another of Ditranserva's characteristics as a company that bets on training for its staff.

The UACF 17P Advanced plant the company purchased is already at work in Lima. The machine, acquired last December, began operating in May, occupying an area approximately 30 minutes from downtown Lima.

New equipment

"In Lima, companies mainly work with plants that are more than ten years old, and these produce average to poor quality asphalt. Without a doubt, Ditranserva now produces the best hot asphalt you can find in the Lima Metropolitan Area," pointed out Juan Manual Draxl, from Intermaq, Wirtgen Group dealer in that country, who also pointed out the growth and renovation of the Peruvian market. "Since this is the capital city's most modern plant, the company has already obtained asphalt production and placement contracts for other large projects."

Ditranserva has invested in the renovation of its equipment: in addition to the plant, it recently acquired an AF 4000 paver and a W100 milling machine, in addition to Hamm compactors.

According to Draxl, the counterflow asphalt plant market is growing in the Andean country: "Many infrastructure projects that require the use of hot asphalt are being carried out, both in Lima and in the provinces. Thus, many contractors are replacing their old plants for equipment with superior technology."

Víctor Castro (Ditranserva) and Juan Draxl (Intermaq)

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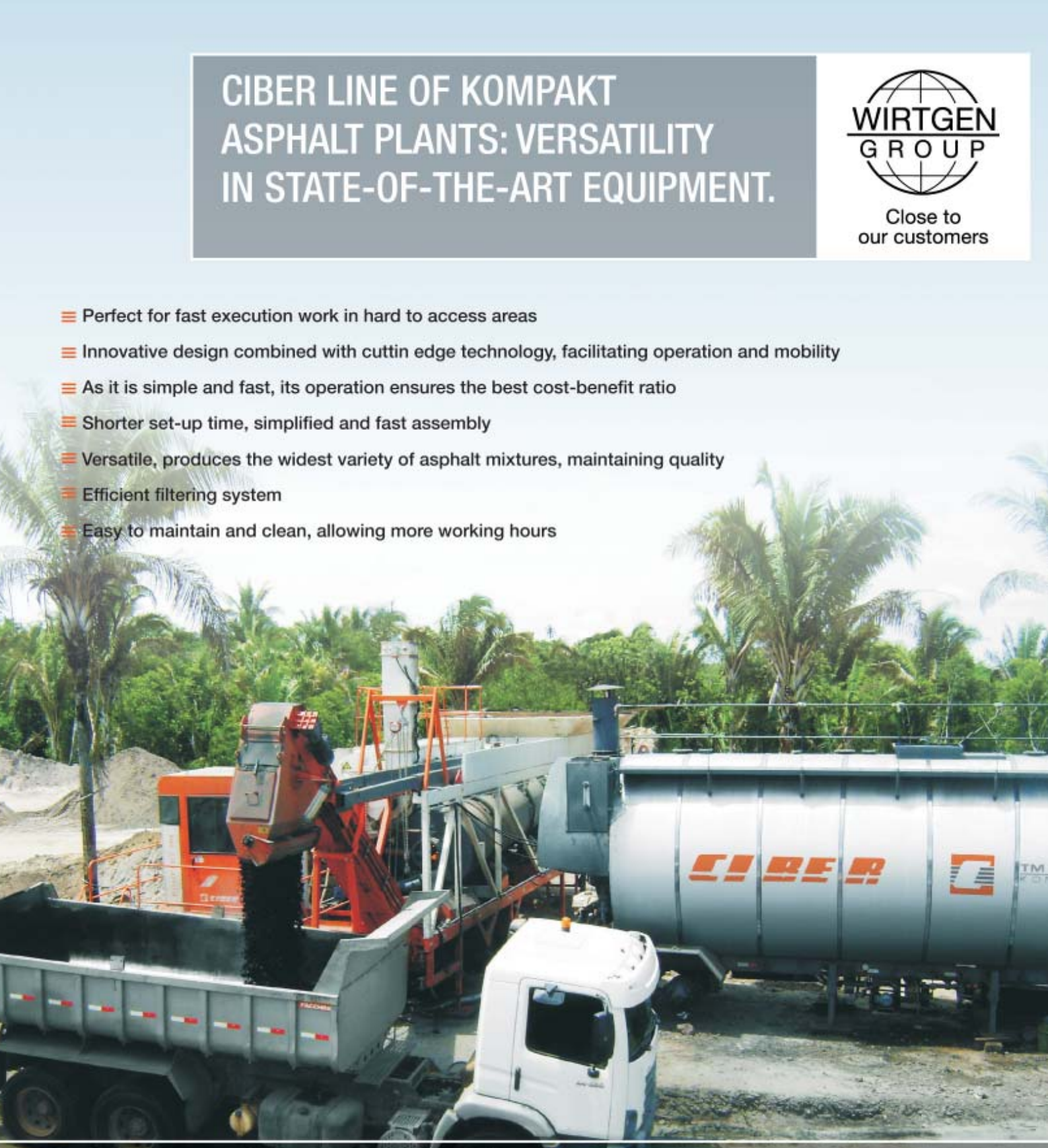

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