











ROAD AND MINERAL TECHNOLOGIES

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NEW CIBER UACF INOVA ASPHALT PLANT



Exclusive RAP processing system, with configurations for obtaining mixtures containing up to 50% recycled material.



system both sustainable and highly attrac-tive, economically speaking. From the technical point of view for the asphalt mixture, preserving the greater portion of the recovered binding agent resulting from the mechanical concept developed by CIBER makes it possible to work at high recycling rates, only incorporating less viscous virgin binding agent or by incorporating rejuvenating additives into the recovered binding agent.

DID YOU KNOW?

The UACF iNOVA is ready for recycling

The rehabilitation and corrective maintenance of urban asphalt pavement produces a large amount of milled recyclable material out of the deteriorated pavement. Despite these materials' great usefulness, they are commonly used merely to create the base layers of pavement, which underestimates their potential, both in granulometric terms and mainly in terms of the bituminous binding agents they contain.

Hot recycling is the answer to concerns related to non-renewable resources for pavement production, making this

ing 50% of non-renewable resources like rocks and petroleum significantly reduces the environmental impact inherent to hot milled

Depending on the percentage of binding agents in the fine and rough fractions and the proportions of the latter two materials, you can save approximately 50% on binding agents and additives in the fabrication of a new mixture, considering a recycling rate of 50%. No significant increase in fuel consumption will result from the parallel flow heating of the milled material, since it presents only superficial moisture and for that reason requires less energy to heat



Modular 10% RAP configuration



Modular 50% RAP configuration





to achieve up to 50% recycling rates.



The Ciber UACF iNOVA asphalt plant has a longer dryer, which can be

shipped ready to use up to 10% RAP, fully interconnected to the equipment's control system. It is also possible, by installing other optional components,







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OPPORTUNITIES FLOWING

he infrastructure sector is expecting another positive period to begin in Brazil. With such a large backlog on highway paving in the country, the concern for improving road-based transportation is evident. Construction projects underway all across Brazil are proof positive of this. Companies like Enpa and PSO Engenharia have been revitalizing highways and urban roads in the states of Mato Grosso, Ceará and Paraíba, to cite just a few cases.

In addition to the positive market prospects, Brazilian contractors are also relying on Federal Government incentives. Stimulus programs from the National Bank of Economic and Social development (BNDES) are helping companies invest in technology and innovation. In this way, they will be stepping up their fleet of machinery and developing projects from North to South.

Set to host large scale world sporting events like the 2014 World Cup and the 2016 Olympic Games, Brazil has been investing more and more in improvements. The imminence of these

opportunities is benefiting the entire population. For example, in Porto Alegre, Coesul Mottola is carrying out water network, rainwater and sewage projects, as well as paving work in the area surrounding the new Grêmio Foot-Ball Porto Alegrense Arena in Humaitá neighborhood. For its part, Conpasul is working on renovating bus corridors on important avenues in Rio Grande do Sul's capital city. The implementation of a new system - Bus Rapid Transit - will lead to greater mobility and improve traffic circulation in the city.

There are many opportunities for contractors, not only in Brazil, but in other countries where Ciber Equipamentos Rodoviários operates. One example is Venezuela, which has been investing heavily in infrastructure work. There is still much to be done and 2013 has everything going for it to be a great year for our sector. Ciber is prepared to provide the market with the equipment it needs. We are always committed to guaranteeing the quality of our equipment and services. We excel at providing cutting edge solutions that meet customer needs at every stage of the job.

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SEND INFORMATION ABOUT CONSTRUCTION WORK, WIRTGEN GROUP EQUIPMENT, CRITIQUES AND CONSIDERATIONS. TAKE PART!





special

SUSTAINABLE PROJECT IN CEARÁ



Repairs on Highway BR-222 between Fortaleza and Sobral using cold recycling to ensure savings and environmental responsibility



market

VENEZUELA INVESTING IN DEVELOPMENT

Vialidad Y Construcciones Sucre active in projects in favor of the country's progress

EVENTS

14

Visit to Wirtgen Group in Germany



Representatives from many countries attended the 2012 Mineral Technology Days, which featured lectures and machinery demonstrations. Another group of Brazilian entrepreneurs were able to visit all of the factories and saw for themselves the technology and attention to quality involved in manufacturing Wirtgen Group equipment.



infrastructure



18 BR-060 WIDENED IN GOIÁS

EMSA Contractor is leading the work being done on one of the state's main roads

EDITORIAL	03
MARKET	06
SPECIAL	10
EVENTS	14
TECHNOLOGY	17
INFRASTRUCTURE	18
INTERVIEW	23
WHAT'S HAPPENING	24

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PORTO ALEGRE PREPARES FOR WORLD CUP

BENTO GONÇALVES AND PROTÁSIO ALVES AVENUES HAVE THEIR BUS CORRIDORS
RENOVATED TO INTRODUCE BUS RAPID TRANSIT SYSTEM (BRT), SCHEDULED
FOR COMPLETION IN AUGUST OF 2013

onsidered one of Brazil's largest metropolises, Rio Grande do Sul's state capital of Porto Alegre is preparing to be one of the host cities for the 2014 World Cup. A wide variety of infrastructure projects, such as renovation of the bus corridors on Bento Gonçalves and Protásio Alves avenues, on the Eastside, are already underway and promise to modernize and increase public transportation agility in the capital city. Introduction of the Bus Rapid Transit System (BRT), already used in Brazilian cities like Rio de Janeiro, will improve mobility for the population,

which will access the buses in a dedicated corridor, with more than one door to get on and off for users. With the new development, the buses will stop at their own terminals with platforms at the same height as the vehicle. Fares will be paid at the terminal, not on the bus, allowing users to ride more than one vehicle to their destination, making connections between the stations and still paying for just one ticket.

Responsible for carrying out the work in consortium with Sultepa, Conpasul has been a reference point in the construction market for 28 years. Headquartered in the



Bus corridors should improve urban mobility

improving bus circulation. "Concrete is more durable and less susceptible to irregularities. This reduces wear and allows the vehicles to go faster," explained Nilton Scapin, director-president of Conpasul."

The new bus system will also help reduce central Porto Alegre's intense traffic congestion. "The goal is to make public transportation more attractive to the population, speeding it up and improving urban mobility," added Scapin. The planned stations follow the principles of sustainability, using an air conditioning system with both natural and forced air ventilation. These mechanisms will be alternated according to the weather conditions, humidity and air temperature and controlled by an automated system. Electricity will be generated by solar panels - part of the stations' roofing. The windows will feature tempered glass laminated with a film that provides protection against heat and ultraviolet rays.

With the sporting event fast approaching, the company needed to make choices that would speed up progress on work. "When we choose our equipment, we pay close attention to cost-benefit ratios and deadlines. We are always on the lookout for equipment that can help us finish faster, while also costing less and being reliable. Wirtgen Group equipment meets all these requirements," said Scapin. They have 18 months to finish the work, with completion expected in August of 2013.

largest companies and has eight branches in different cities across Rio Grande do Sul. The company's commitment to quality - it has been ISO 9001 certified since 2004 has ensured its offer of competitive solutions in concrete, paving work, crushing, sanitation work and construction on hydroelectric dams. On the BRTs, the company is using a Wirtgen W 100F milling machine to remove asphalt from the lane where concrete will be laid. Changing the pavement on the stretches will play an important role in

city of Estrela, the contractor is one of Taquari Valley's

Wirtgen W 100 F milling machine at work







WORKS REVITALIZE HIGHWAYS ACROSS BRAZIL

COMPANIES LIKE **ENPA**, FROM MATO GROSSO, ENSURE

HIGHWAY MAINTENANCE



nvestment in highway maintenance is necessary to make sure the nation's economy will keep moving. Over time, asphalt tends to wear out. That makes it hard for heavy vehicles to travel and subsequently harms the flow of production on highways. This is why revitalization work is done periodically.

Enpa - Engenharia e Parceria, from the state of Mato Grosso, is one company that contributes to infrastructure on Brazilian highways. With jobs in Rondônia, Amazonas, Mato Grosso do Sul and Ceará, the company specializing in site leveling and paving work has been providing services for the National



Department of Transportation Infrastructure (DNIT). The goal of this work is to revitalize highways, avoiding even greater costs in the future from having to completely rebuild extremely damaged stretches. "This type of intervention rejuvenates the pavement, which belongs to the nation," explained João Borges de Oliveira Júnior, construction work director.

In Ceará, Enpa is working on Highway BR-020 maintenance and the Fortaleza Metropolitan Area ring road. Work began last August and is scheduled for completion in August of 2014. 120 kilometers of asphalt road will be repaired, at least a third of which has already received a new layer of asphalt. A Wirtgen W200 milling machine, a Ciber UACF 17-P asphalt plant and a Ciber AF 4000 paver are a few examples of the equipment being used.

Recently, Enpa also acquired other pieces of Ciber equipment to use on jobs in Mato Grosso do Sul. This time the stretch of highway to be revitalized lies between the capital city of Campo Grande and Três Lagoas, with 320 kilometers of Highway BR-262 receiving a new layer of asphalt.

The company has been using Wirtgen Group equipment for 12 years now. According to João Júnior, performance has been very good, meeting the needs of their jobs. "Our goal is to do high quality work," he stated.



VENEZUELA INVESTS IN INFRASTRUCTURE

VIALIDAD Y CONSTRUCCIONES SUCRE IS GOVERNMENT'S

RIGHT ARM FOR DEVELOPMENT



nvesting in infrastructure is important to any country's development. For example, bridges, highways and subway lines facilitate the flow of production and urban mobility, both indispensable to any nation wanting to become more prosperous.

In Latin America, one example of this is Venezuela. That country's government has announced many different projects, investing previously unheard of amounts in the country's infrastructure sector. In the field of transportation alone, 1.16 billion dollars were expected to be invested in projects to be carried out in 2011 and 2012 - highway drainage and paving work were just a few of the construction projects carried out.

One of the contractors responsible for making this time of prosperity possible is Sociedad Mercantil Vialidad y Construcciones Sucre S.A. It is a state-run Venezuelan company operating in the civil construction field. Created by a Presidential Decree in 2005, the company is tied to the Ministry of Ground Transport and its objective is to carry out highway construction and maintenance, as well as other public infrastructure work. It is the government's most important arm for ensuring national development.

Recently, Vialidad y Construcciones Sucre was granted two Ciber UACF 17P2 asphalt plants by Conviasa. One of the plants is operating on a job in the city of El Banqueo, state of Miranda, in the country's Northeast. Miranda is the second most populous of Venezuela's 23 states, in addition to being an important political, economic, cultural and commercial center. Last year alone, 156 million bolivars (equivalent to roughly 36 million dollars) were invested in carrying out 52 emergency jobs, according to a government announcement.





MAINTENANCE IN THE NORTHEAST

From one end to another, BR-222 ranges over 1,800 kilometers. The highway is currently in different states of repair, depending on the sub-stretch. In Ceará alone, where 348.8 kilometers of the highway are located, one comes across everything from four lane stretches in good condition to places with potholes, cursory repair and substandard signage. This information was provided by the National Department of Transportation Infrastructure (DNIT).

Since it is an important route between states in the North and Northeast, BR-222 has been the recipient of pavement repair and conservation work. One of them aims to improve truck traffic between the cities of Fortaleza and Sobral, a city in Ceará that boasts one of the state's biggest economies. Sobral is well known as an export hub, in addition to being home to manufacturers of footwear and cosmetics, mining and concrete production.

The jobs in question are being done by Camter Construções e Empreendimento S/A. The company, headquartered in Belo Horizonte, capital city of Minas Gerais, operates in several segments: dam construction,

mining, sanitation work, site leveling and construction. Regarding highways and urban roads, Camter has already carried out projects in many different Brazilian states, such as Rio de Janeiro, Minas Gerais, São Paulo, Goiás, Amazonas, Rondônia and Acre.

Work on the stretch of Highway BR-222 is expected to be completed by February of 2013. In the meantime, machines are hard at work repairing pavement and producing asphalt for the highway.

COLD RECYCLING LEADS TO MORE SAVINGS

For highway maintenance operations, cold recycling is one technique that lends quality to the pavement and even makes it possible to repair roads in advanced stages of deterioration. The process also costs less in comparison with other solutions currently in use by the sector. The work being done on BR-222 is using a Wirtgen WR2000 recycler, which carries out the procedure. The equipment belongs to Recipav, from Pernambuco, and Camber rented it especially for the project.





<<<

Wirtgen WR2000 recycler used on Camter's jobs in Ceará

Cold recycling makes complete use of the existing pavement material. This does away with the need to find a place to dispose of it. The volume of new material needed to be brought from the quarries is also minimized, subsequently reducing rural escarpments - abrupt alterations in topography generally caused by the opening up of quarries and excavations. Less material

needed also means reduced shipping costs. This saves energy. The highway grid itself also benefits, since fewer heavy vehicles means less wear and tear on roads.

The WR2000 recycler has a two meter working width and can reach depths of 500 millimeters. It is Wirtgen's most compact cold recycler.

The recycler's pulverization unit features a modular design. This allows the machine to be used in a variety of highway and road construction applications, doing everything from cold recycling to soil stabilization to asphalt layer pulverization. Another advantage the equipment offers is its ability to be easily maneuvered and transported. The dimensions of its transporter allow the recycler to be moved at any time without the need for a special license.

In addition to all these savings, good results are still guaranteed. Mixing materials like water and stabilizing agents on site is synonymous with high quality. The computer controlled pump system ensures precise addition of liquids and the components are thoroughly processed in the mixing drum. In this way, the WR2000 is ready to meet construction work needs, always efficiently and with impressive savings.



Two Ciber UACF 17 P1 asphalt plants work on the jobsite



VISIT TO WIRTGEN GROUP IMPRESSES ENTREPRENEURS

GROUP OF BRAZILIANS GOES TO GERMANY TO SEE FACTORIES AND

OBSERVE EQUIPMENT IN OPERATION V





ver 1,400 mining company and contractor representatives from 65 countries converged on Windhagen, Germany, last September, on invitation from Wirtgen Group. They attended the 2012 Mineral Technology Days. The event, held at the Wirtgen factory on the 13th and 14th, was a great opportunity for the visitors to watch live demonstrations of the machinery in action.

In addition to presentations of the equipment being used, the event also included informative speeches by international specialists covering strategies used in mining processes. There was also time for a tour of the facilities, which gave those present greater knowledge about the group.

The event was marked by the exchange of experiences and technology employed in the equipment on display, placing the quality of Wirtgen Group products in evidence. One of the highlights of the event was the presentation of the Wirtgen 4200 SM surface miner.

Presentation of Wirtgen 4200 SM surface miner during 2012 Mineral Technology Days

The equipment has a mechanically activated cutting cylinder for selective mining of coal and iron ore. The miner can also cut soft to semi-hard rocks. For their part, Kleemann brand mobile crushers and screens surprised the public during special exhibitions as they broke and processed large pieces of rock with ease.

Antônio José Leiria Moura, a representative from the EMSA/Egesa/Cros/Vilasa consortium, was impressed with what he saw on his German visit. "I was pleasantly surprised by the cleanliness, organization and work being done on the production lines. They are so specialized and their quality is impressive," he commented. Álvaro Guedes, from Pavia Brasil Pavimentos e Vias, said that Technology Days surpassed his expectations: "My two days at Wirtgen were very worthwhile. The group came with common goals."

FACTORY TOURS

Another group consisting of 70 Brazilian entrepreneurs also visited Europe to see Wirtgen Group's factory units. The modernity of the facilities and production process quality attracted the attention of the contractors' representatives. Wanderley Leite Silvano, from Paulifresa, emphasized the organization of the factories. Guilherme Sampaio Gonçalves, from the same company, commented: "They have fantastic production technology, which is not surprising considering the excellent products they produce."

A representative from Construtora Abraão, Zigomar Costa Avelino Filho, pointed out the importance of the strict quality control and assembly of the equipment: "We noticed that it is only with this level of control that it becomes possible to achieve perfection and quality in their products. The visits served well to strengthen the level of confidence we place in Wirtgen Group equipment."

The contact with cutting edge technology was also a great opportunity for visitors to learn more about recent innovation - a type of knowledge that encourages improvements of their own services. "Our visit to the factories was very profitable, since the technology they employ in their equipment challenges us to improve our services and also lower our cost of execution. I will always be eager try out new engineering equipment," stated Dioceles Claro dos Santos, from DCS-CL Construtora.

Brazilian Technology Days participants
at Kleemann factory





Group of Brazilians visits Hamm
compactor factory in Germany







MINING ON THE AGENDA IN AMAZÔNIA

EVENT HELD IN PARÁ ATTENDED BY AUTHORITIES

IN THE FIELD **V**

ará's capital city of Belém hosted 2012 Exposibram Amazônia, November 5-8. The event, held at the Amazônia Convention Center and Trade Show Hanger, consisted of the third edition of the Amazônia International Mining Exposition and the 3rd Amazônia Mining Conference, during which today's main themes for the sector were discussed. The activities were attended by Brazil's biggest authorities in the field. Professors, students and mining business leaders were given the opportunity to learn more about topics like mining on Indigenous lands, strengthening of the social license for mineral project operations and evolution in

Exposibram Amazônia is considered the largest event for professionals in the field of mining in Northern Brazil. Its objective was to improve society's understanding of one of the region's main economic activities, responsible for keeping Pará in an outstanding

sustainability management for the sector.

position regionally in terms of job creation, according to the Inter Trade Union Department of Statistics and Socio-Economic Studies (Dieese).

EQUIPMENT ATTRACTS ATTENTION

Wirtgen Group was present at the 2012 Exposibram Amazônia with Deltamaq, their local dealer. Those who visited the company's stand were able to see a replica of the Wirtgen 4200 SM mining machine up close. The clientele were also able to see details of the equipment and learn about its advantages. Its main advantage is that it reduces the number of machines that are usually used in mining work by doing away

with the need for backhoes and front loaders. "This is one of the great advantages of Wirtgen's surface miner. It helps our customers increase their speed, efficiency and savings," explained Luiz Marcelo Tegon, president of Ciber Equipamentos Rodoviários.

The Wirtgen 4200 SM also does away with the use of explosives used in the process, which reduces noise. It also carries the crushed material directly to the transport vehicle, reducing fuel and tire consumption, improving sustainability. In Brazil, the Wirtgen 4200 SM surface miner is being sold by Ciber through its dealers.





Visitors examined replica of the Wirtgen 4200 SM surface miner



ECONOMICAL ASPHALT MIXTURE PROMISES GOOD RESULTS

PRODUCT USED BY **VIATOP** TESTED ON HIGHWAYS IN BRAZILIAN

SOUTH AND SOUTHEAST



s technology continues to develop, more and more efficient products are reaching the market. In the case of asphalt mixtures, several factors are a cause for constant concern. Durability, safety and savings are characteristics that have a direct influence on a job's success in the long term. For this reason, investing in new developments is always welcome so as to ensure quality results.

Viatop, a company that produces fibers for asphalt mixtures, has been testing a newcomer to the Brazilian market. SMA 0/5, an asphalt mixture with discontinuous grain size and high binding agent content. According to Viatop engineer André Marafon, it can be applied as little as 15 millimeters deep, making the process much more economical. Other mixtures are used in thicknesses of approximately 25 millimeters.

Marafon pointed out the qualities of SMA 0/5. One of them is its high performance due to its increased durability. Another is safety, "because of its good friction coefficient and the fact it doesn't let rocks loose that might break car windshields," he explained. The comfort it provides to drivers is also mentioned, since it generates very little noise and vibrations.

In addition to all these positive points, "another advantage is that the product can be used at night, which isn't possible when the cold microsurface is laid down" said Marafon. Thus, more time can be employed on projects, ensuring faster delivery dates for jobs.

So far, SMA 0/5 has been used experimentally on highways and urban roads in the states of São Paulo and Paraná. Along the coast of São Paulo, in the city of São Sebastião, the road chosen for testing was the avenue that leads to the ferry taking tourists to Ilhabela Island. In the capital city, surfacing was done on Ayrton Senna Highway – 800 meters at km marker 14, leaving the city - and 400 meters on Brigadeiro Faria Lima Avenue, an important artery in the city's financial district. Highway BR-277

also received a kilometer of the new asphalt mixture in Guarapuava, a city in south-central Paraná. "All of the results have been very satisfactory," stated the engineer.

In order to carry out the projects and lay down the product, you need high technology equipment. To this end, Viatop trusts Wirtgen Group machines, which meet the company's needs. For example, the company has a Vögele Super 1800-2 SprayJet paver. "The mixture we lay down is very thin, which means that spraying the binding onto the existing pavement becomes a decisive factor in the job's success. This is the only machine that can do the spraying just moments before the new pavement is applied," ensured Marafon.

Along with the pavers, they also use Hamm brand oscillating compaction rollers. Since the asphalt mixture is so thin and the additives so intense, "oscillation is the best way to do the compaction," in the engineer's opinion, because the process doesn't leave any irregularities, nor does it crush the additives.









QUALITY IN WIDENING OF BR-060



EMSA CONTRACTOR IS ACTIVE ON JOBS GENERATING DEVELOPMENT IN BRAZIL, SUCH AS WIDENING HIGHWAY BR-060, CONNECTING THE CITIES OF RIO VERDE AND GOIÂNIA IN THE STATE OF GOIÁS, AND OTHER BRAZILIAN CITIES Y

or the past 41 years, Brazilian contractor Empresa Sul Americana de Montagens (EMSA) has been participating in developing the nation by carrying out infrastructure projects in every region. Its main works in progress, according to mechanical engineer and EMSA machinery and equipment manager Gilberto Alencar Prates, are site leveling and paving work, public sewer systems, civil construction work and irrigation, through

partnerships with the federal and state governments. An especially noteworthy project among these is the widening of BR-060, an important federal highway that connects the cities of Rio Verde and Goiânia, in the state of Goiás, and other Brazilian cities.

In order to step up the work being done, the company acquired a Wirtgen SP 15 concrete paver. "This purchase was mainly motivated by our need for high productivity







New Jersey barriers made by the paver



in combination with high quality end product, not to mention the equipment's versatility," Prates explained. According to the engineer, the machine is being used on the zero kilometer stretch of BR-060, making safety barriers known as New Jersey barriers for the Rio Verde exit leaving Goiânia. This type of barrier is used to separate flows of traffic and its main advantages include high resistance to vehicle impacts and compact size, taking up little space on the road. According to the EMSA manager, the same equipment will also be responsible for the gutters of the central median on the same job.

Made up of more than 15 companies, EMSA Group is also active in the areas of development, mining, building security and surveillance, livestock raising, shipping and an air taxi service, among others, creating over 5,000 direct and indirect jobs. They are even present in the Latin American and African markets, and are recognized for their quality management system, ISO 9001:2000 certified since May of 2001. "At EMSA, we are always focused on quality, continuously investing in new techniques and equipment that will allow us to offer better products and services," added Prates

RIO DE JANEIRO WILL HAVE NEW OLYMPIC PARK





GLOBAL RCD WORKS ON DEMOLITION OF NELSON PIQUET

INTERNATIONAL AUTODROME V



elson Piquet International Autodrome, also known as Jacarepaguá Autodrome, in Rio de Janeiro, Brazil, will soon be demolished. The old track, grandstands and buildings will make way for construction of the city's Olympic Park. During the scrap material processing stage a Kleemann MR 110 Z EVO mobile crusher is being used, owned by Global RCD Ltda. - the company responsible for the service of crushing said materials.

According to Renan Leite, the company's representative, the detritus will be reused. The crushed material will first be analyzed in the laboratory and then used in the construction itself as a pavement base and sub-base. "We chose the MR 100 Z EVO crusher because it's the only one that's right for this type of job," emphasized Leite.

Authorities were present at the Olympic Park's groundbreaking ceremony, such as Rio de Janeiro Mayor Eduardo Paes, Brazilian Olympic Committee President Carlos Nuzman, and gymnast Diego Hypolito. After the Olympics, the sports facilities should be transformed into schools, libraries, day-care centers and theaters. The capital of Rio de Janeiro will also be getting another space for car racing, in the Deodoro neighborhood. The new complex will cover 1.18 million m2 and will be hosting competitions in 14 different sports for the 2016 Olympic Games, such as handball, judo, cycling, aquatic sports and artistic gymnastics.

STATE-OF-THE-ART TECHNOLOGY

Global RCD's choice of the MR 110 Z EVO took some of the technical peculiarities of this Kleemann brand crusher into consideration. The equipment can be used both for processing natural rock, asphalt and demolition scrap material and for manufacturing extremely high quality end products. Its up to 1120 x 800 mm entry spout is able to produce at rates usually only achieved with far larger crushing solutions. Feeding capacities of up to 350 t/h are easily achieved.

Kleemann MR 110 Z EVO at work on **V**









Hamm 3411P compactors get the job done

PROJECTS IN PARAÍBA SET TO IMPROVE TRAFFIC CONDITIONS

NORTHEASTERN STATE HAS MADE A SERIES OF INFRASTRUCTURE
INVESTMENTS IN THE CAPITAL AND RURAL AREAS

he Brazilian state of Paraíba has a variety of infrastructure jobs underway. The projects include highway and urban road repair, in addition to projects to widen roads and build bridges both in rural areas and the capital of João Pessoa.

PSO Engenharia de Infraestrutura is responsible for eight of these jobs. "We have five projects on urban roads, two bridges and one highway job," listed Daniel Souza Andrade, a buyer for the company from Minas Gerais. The goal is to improve traffic infrastructure in the Northeastern state.

The largest of the jobs underway is the paving of streets and avenues in the city of João Pessoa. Investments to renovate the asphalt on the roads add up to BRL 700 million.

Other noteworthy examples are the bridges. Batalha Bridge on State Highway PB-004 between the cities of Santa Rita and Cruz do Espírito Santo was enlarged, more than doubling in size. It went from 70 to 160 meters long,

end to end. The job was budgeted at BRL 2.8 million, paid for by the state government.

A new bridge will be built over Cruz River, known as Jatobá Bridge, providing access to the city of Patos. This project has long been a demand from the region's residents. Stretching out over 128 meters, the bridge will cost a little under BRL 4 million, also to be paid for by the state government, through the Paraíba Highway Department (DER-PB).

Wirtgen Group equipment is being used on the projects. A Ciber SA 115 CR paver and Hamm 3411P and HD 90 model compactors are in operation. According to Andrade, the pursuit of quality and good prices is what motivated PSO to choose the group's equipment. "The group's machines provide us with great efficiency. They are able to get the job done much faster, while maintaining the same quality. To this end, we use the equipment on every single job we do."



ACCELERATED WORK AROUND GRÊMIO ARENA

COESUL MOTTOLA CONTRACTOR AT WORK ON INFRASTRUCTURE FOR ROADS SURROUNDING ARENA – GRÊMIO'S NEW STADIUM IN THE CAPITAL OF RIO GRANDE DO SUL – NEAR HIGHWAYS BR-290 AND FUTURE BR-448 Y

V

n the area surrounding Grêmio Arena, inaugurated last December, construction continues near BR-290, known popularly as the Freeway, on the Northside of Porto Alegre, capital of the state of Rio Grande do Sul, Brazil. Construction of the modern sports facilities - 28,000 m2 of commercial space with a capacity for up to 60,700 people - is also fueling development in Humaitá neighborhood. Heading up infrastructure work on Voluntários da Pátria and Padre Leopoldo Brentano avenues and Um Street, Coesul Mottola contractor is responsible for work on rain management and sewage systems, the water network and 40,000 m2 of paving work. Over half the rainwater management system

and paving work is done, Coesul Production Manager Leandro de Azevedo Goggia evaluated.

With 43 years experience in the construction market, Coesul operates in the field of urban infrastructure as a whole, qualifying itself technically and operationally for the asphalt paving segment. In the work being done around the arena, the company is using two Hamm 3411 compactors to execute the base and sub-base layers of graduated gravel for paving work. "The equipment is of fundamental importance, since it optimizes our work, as well as saving fuel," stated the civil engineer. Another piece of technology he pointed out is the Hamm HD 75 compactor, responsible for compaction

of the blocks. "They guarantee process efficiency, even in the laboratory, where periodic essays are conducted to make sure compaction is being done correctly," explained Goggia.

Grêmio Foot-Ball Porto Alegrense is one of Rio Grande do Sul's main football teams. According to Goggia, the work being done around the stadium, begun at the end of July, should continue until March of 2013. "We have a 12 month contract with City Hall," he added, also mentioning their construction of an access ramp for fans. "It's on that stretch (Voluntários da Pátria and Padre Leopoldo Brentano avenues and Um street) that the greater part of traffic will flow, both for the arena and the future Park Highway, which passes Leopoldo Brentano," the engineer pointed out.



QUALITY PLAYS A FUNDAMENTAL ROLE

DANIEL SIEBRECHT HAS A SPECIALTY DEGREE IN INTERNATIONAL PROJECT ENGINEERING AND PRODUCTION TECHNOLOGY FROM THE APPLIED SCIENCES UNIVERSITY OF KONSTANZ, GERMANY. PRESIDENT OF CIBER ALONGSIDE LUIZ MARCELO TEGON, IN THIS INTERVIEW HE DISCUSSES THE COMPANY'S QUALITY ASSURANCE PROCESSES.



Usina de Notícias - A new administration is getting started in Ciber's industrial department. Which policies are you planning on to improve the quality assurance process so as to keep the company on the forefront in an increasingly competitive market?

SIEBRECHT-Ciber and our suppliers recognize our customers' quality demands. The entire staff has an entrepreneuring mindset and with that we are constantly establishing and developing new policies to ensure the quality and efficiency of our operations. We seek constant improvements to always stay a step ahead of the competition.

UN - What criteria does Ciber equipment need to satisfy in order to meet the company's quality standards?

SIEBRECHT - Ciber's quality standards are defined by our customers. Generally speaking, they include aspects

like delivery time, performance, durability and efficiency. We use a wide variety of tools based on industrial lean production concepts like Six Sigma, defining criteria so we can be sure our customers are purchasing equipment in perfect working order, in accordance with their needs.

UN - Does the equipment produced in Brazil meet the same quality standards as their imported counterparts made in Germany?

SIEBRECHT - Yes, the equipment produced in Brazil and Germany follows the same quality criteria. If the machinery meets the high standards of the Wirtgen Group in practice, they are then ready to enter our production scheme. That becomes clear during the test stage.

 $UN\mbox{ -} \mbox{ Achieving quality is a goal that involves a product's }$ entire useful life cycle. How does that work?

SIEBRECHT - Quality is the result of careful planning, designed and executed throughout the product's life cycle. Our company is supported by ISO 9001. New products and technology is tested in the development stage by the product engineering department. Afterwards, the tryout is executed by assembling the first machine, with monitoring being done together with the process and quality department. At this time, standards are set up that are to be followed to guarantee the product meets the defined specifications. After the production cycle, equipment behavior is monitored, as well as customer perceptions of the product. This information provides feed back to Ciber's information system and leads to ongoing process improvements.

ASIAN MARKET ENTRANCE





Equipment presented in Malaysia

In order to mark the entrance of Ciber Equipamentos Rodoviários to one of the world's most promising markets, Southeast Asia, the company

presented equipment produced in Brazil to the audience present at the Wirtgen Innovative Road Construction Machinery event in Malaysia. The highlight of the presentations was Ciber's UACF 19 P2 asphalt plant, which combines portability, continuous production technology and excellent asphalt mixture quality, all characteristics sought by demanding clients like the Malaysians and Asian Tigers. "The Asian market is quite competitive and demands high technology equipment, as well as boasting large sales potential," pointed out Guilherme Ratkiewicz Rodrigues, Area Manager for Ciber. Ciber operates in Latin America, Africa and Oceania. Other Wirtgen Group companies have already entered the Asian market, which is why the event was of such great importance for clients to learn about our brand's products. On the occasion, other new products were presented as well, such as Hamm's HD O75V and GRW 280 compaction rollers and Vögele's paver with the Super 1800-2 SprayJet module.

SCHOOL FOR MECHANICS FORMS NEW CLASS



Deltamaq, Wirtgen Group's dealer in the states of Pará, Amapá, Amazonas and Roraima is carrying out a project with the goal of developing theoretical and practical knowledge for mechanics working on heavy machinery, as well as providing professionals with the basic skills needed to maintain mining, site leveling and construction equipment. The Mechanics' Training School lasts five months and two classes have graduated since it opened its doors. The first class graduated in 2011 and the second in November of 2012. The initiative is a partnership with SENAI (National Industrial Learning Service), and teachers are hired to give theoretical classes in the morning and practical ones at the company's facilities in the



Course consists of theoretical and practical classes

afternoon. After passing the course, students are hired by Deltamaq. In order to sign up, candidates need to be between 18 and 24 years of age, have a high school diploma and be enrolled in technical night school.

PORTO ALEGRE HOSTS 1ST ENSECOP





The first edition of the National Heavy Construction Sector Syndicates Meeting (Ensecop) took place in Porto Alegre on

November 5 and 6. Sector specialists debated the theme "What does Brazil need to increase infrastructure investments and increase efficiency?" Among other subjects, the Ciber-sponsored event presented a proposal to create a National Forum on Heavy Construction.



OPPORTUNITY FOR YOUTHS IN CAPÃO DO LEÃO



The second class of the Pescar project (literally "fishing"), which offers educational opportunities to low-income youths, was formed in September, in the city of Capão do Leão, in Southeastern Rio Grande do Sul. The goal of the classes is to provide guidance and prepare them for the job market. In small cities like Capão do Leão, the program is even more important for the local community. For example, in the first class, seven students were hired to work for SBS Engenharia, a company that is a partner with Ciber Equipamentos Rodoviários in the action.



Class of Pescar Project students

SUSTAINABILITY ON THE AGENDA IN MIDWESTERN GATHERING





Wirtgen Brasil Centro Oeste and the Engineering Company Association of Goiás (AGE) held a meeting on November 13, in the city of Goiânia, with the goal of presenting sustainable equipment solutions to increase productivity and reduce costs. On the occasion, approximately 60 business owners and authorities from 40 regional companies were able to learn about Wirtgen Group recyclers that carry out cold recycling, as well as compactors that assist in the process, and milling machines and asphalt plants that do hot recycling, using milled material (RAP) to produce new mixtures. Wirtgen Brasil's manager for the Brazilian Midwest and Northeast, Teodoro Guilherme Schwarz, stated that civil construction entrepreneurs are very demanding, especially in terms of the economical aspects of the machinery: "These companies relate sustainability

to increased construction costs, on account of the technology it requires. In this meeting, our goal was to show how we are now producing technology that combines material reuse with reduced costs," he explained. For AGE Administrative Manager Weber Miguel da Silva Junior, the outcome of the event was positive: "We consider the event a success, since the interaction between business owners and Wirtgen Brasil representatives was perfect."

The speaker was Ciber Equipamentos Rodoviários Product Specialist Juliano Granzotto Gewehr.

THE PLANT OPERATOR WHO BROKE BARRIERS



When you imagine someone operating an asphalt plant, most likely a man comes to mind. But those who think women have no place in this predominantly masculine field are mistaken. 32-year-old Regina de Luca works in civil construction for Companhia de Desenvolvimento de Caxias do Sul-RS (Codeca). She says that since she began working in the field operating a crusher she has never suffered from prejudice

or disrespect and hasn't ever considered giving up. "If I had the chance, I would certainly choose the same profession again," she stated. Regina is currently operating a Ciber UACF 15 P1 asphalt plant, and she is full of praise for it: "When I started working with this machine, right away I could tell the difference from the others. I really like it. It's different, much more practical for the operator," she added.



Regina has never considered giving up



YOUR COMPANY ON THE PAGES OF USINA DE NOTÍCIAS MAGAZINE

Usina de Notícias is a publication that depends on your participation. Would you like to help make the next edition? Send your suggestions for stories to our email:

usinadenoticias@ciber.com.br usinadenoticias@ciber.com.br. Your projects may become news.

The email address is also a tool for us to communicate with our readers.

Suggestions and information about construction projects and **Wirtgen Group** equipment are also welcome!

ERRATA

Last edition, Usina de Notícias published a note referring to Ciber Equipamentos Rodoviários' participation in the Algiers International Fair (FIA). Different than what was written, the event did not occur in South Africa, but in Argelia.

TALK

CIBER COUNTERFLOW ASPHALT PLANTS



Tradition in equipment that meets all your work needs.

- Compact, easy transport and install, with high-quality production;
- Accurate and easy-to-operate control system;
- EXTERNAL MIXER with double shafts that ensures an excellent mixture;
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TECHNICAL ADVICE /// NUMBER 07

DO MORE WITH LESS. **OPTIMIZE YOUR EQUIPMENT MAINTENANCE!**



ith production volumes on the rise and increasingly strict pollution controls, many dust collection systems fail to meet current requirements.

Controlling particulates with the manufacturer's authentic filtration elements is fundamental towards meeting production goals and maintaining profitability. Ciber Equipamentos Rodoviários Ltda., in cooperation with GE Energy, offers superior filtering quality for asphalt production, ensuring extremely low emissions. A partnership that combines so much technology, reliability and application experience has everything it takes to become your favorite choice.

In the area of maintenance, this takes on a special meaning, since nowadays, everybody is trying to do more with less. With this in mind, we have created new maintenance practices.

THE RIGHT AGENT TO REDUCE THE IMPACT OF MOISTURE ON BAG FILTERS

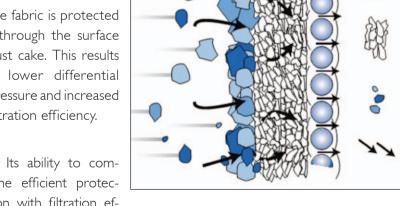
Neutralite® SR (Spark Retardant) powder creates an initial dust cake that absorbs up to 300% its weight in moisture and 250% its weight in oil and hydrocarbons, preventing damage to filtration elements.

Through the injection of an initial dust cake, the fabric is protected by the particles, while still allowing air to flow through the surface



dust cake. This results in lower differential pressure and increased filtration efficiency.

Its ability to combine efficient protection with filtration ef-



ficiency is the result of strict controls to collect different particle sizes and shapes, producing an efficient and porous dust cake.

Independent tests conducted by Southern Research Institute demonstrated that use of the powder drastically increased collection efficiency, while operating at pressure differentials 3 to 4 times lower than operation without an initial dust cake.

LEAKAGE DETECTION SYSTEM

Injecting Visolite® fluorescent powder into the bag filter and using a black light makes it possible to easily identify the points where particulates are passing through, reducing the time required by maintenance personnel to identify tears, holes and bad seals in bag filters.



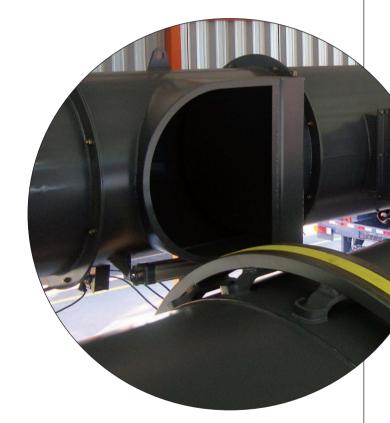
Plant	Bag Filters	Neutralite® (18.9kg bags)	Visolite® (2.27kg bucket)
KP500	64	1	1
KP800	84	I	1
UACF15	72	I	1
UACF17	144	2	2
UAC 19	216	3	3
UAB 18	216	3	3

IF APPLICATION IS NOT DONE AT ASPHALT PLANT STARTUP, FOLLOW THE STEPS BELOW TO APPLY DUSTCAKE OR CHECK FOR LEAKS:

- 1. Turn off the burner. Cut off additive feeding and leave the exhaust fan on until the filter cools;
- **2.** Turn off the exhaust fan.
- **3.** After 10 minutes, turn off the filter cleaning system;
- **◆ 4.** After 5 minutes, turn off the auger(s) and check filter condition. If carbon adherence is seen (soon), the burner should be adjusted.

DUSTCAKE OR LEAKAGE EVALUATION:

- 1. Leaks should be checked away from light (at night);
- **2.** For injection of Neutralite® or Visolite®, open the emergency valve;
- **3.** Turn on exhaust fan;
- **4.** Insert the right amount of Neutralite® or Visolite® in the tubing through the valve;
- **5.** With the dust cake, let the exhaust fan work for 5 minutes. When checking for leaks, leave it working for 20 to 30 seconds;
- **6.** Turn off the exhaust fan and check for plenum leaks with the help of a black light.



If a leak is found we recommend mapping it out for comparison with future tests.

After this procedure, the bag filters will be ready to be put to work. If you are operating your asphalt plant continuously, we recommend carrying out quarterly leakage checks and applying the dust cake when changing bags.

EASY SPIN

In order to complement the ease and practicality of assembly achieved with the new generation of PulsePleat*® elements, we have launched the Easy Spin tool, which facilitates assembly and disassembly of the element.











With the new generation of PulsePleat*® pleated elements, the seal between top and support has achieved even greater quality, making assembly and disassembly of the elements practical and easy. With inner wedges, the new top facilitates assembly of the soft steel ring, which presses the rubber top against the support plate, both ensuring the seal and reducing equipment downtime when changing or cleaning the bag filters.





*For more information, ask for the complete bag filter system materials, available from authorized dealers.