

BETEK NEWS

Progress!



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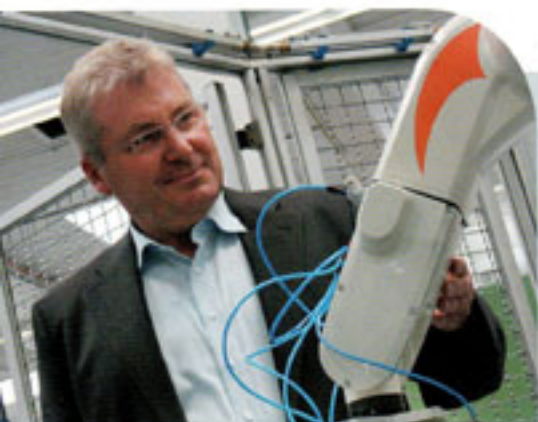
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I EDITORIAL

Dear Business Partners
and Valued Readers,

Trends that had already been heralded in 2011 are now making themselves clearly felt: resource shortages are becoming apparent and the battle for raw materials has begun. Extreme price changes, difficult availability of raw materials due to politically motivated export restrictions and price increases are important factors that are influencing the market.

Betek is noticing this above all in relation to tungsten, the raw material key to tungsten carbide production. The greatest tungsten raw material deposits are in China and

China's government has restricted export quotas considerably. Therefore in order to be as independent as possible, Betek has for some time been working on alternative sources of raw materials and is increasingly using recycled tungsten. In this way we are able to guarantee you a reliable supply of products in proven, top tungsten carbide quality.

Quality assurance takes top priority at Betek and associated with this are years of experience and great know-how. This pays off in particular when it comes to using secondary raw materials. In this area we have made a great deal of progress. It also applies to production technology with our manufacturing line (see page 16).

Innovations drive us on not only in our manufacturing processes, but also as regards our products. New machines and designs naturally require adaptation of the wear tools. You will find examples of this on pages 8-9 and 12-13 of our Betek News.

Sustainability is a term that is getting constantly mentioned at present in the media and in business. And yet sustainability is nothing new. Doing business in a sustainable way means to Betek first and foremost operating in a forward-looking manner and seeing where the problems of tomorrow lie. To make progress you have to keep thinking! In this respect, interaction with you is very important to us so that together we can continue to progress well in the future. Let's jointly find the solutions to the problems of tomorrow!

Best regards,

Karl Kammerer

Managing Director, Betek GmbH & Co. KG

PROGRESSING AND TAKING RESPONSIBILITY



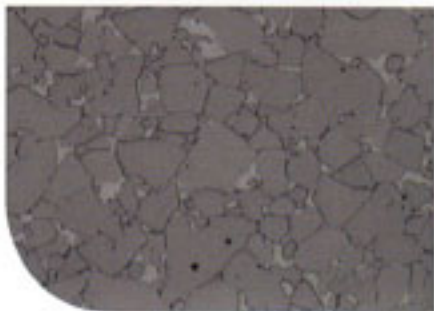
The term sustainability embraces the harmonious bringing together of economic, ecological and social benefits. For Betek as a manufacturer of tungsten carbide consumable tools the careful and responsible use of all resources is one of our key corporate objectives.

Numerous measures are taken that enable the company to operate over the long term in an economically sensible manner, thus ensuring our market competitiveness. What operating in a sustainable way looks like at Betek is described in our new brochure 'Making progress. Taking responsibility.'

Want to know more about this? Order the free 48-page brochure from r.frei@betek.de

ON THE HUNT FOR ALTERNATIVES – “LOOK BEFORE YOU LEAP”

It was pioneering work and the courage and months of planning paid off: In the new spray drying facility that was installed in 2011 at Betek in Aichhalden, we were able to produce from the outset powder ready for the presses. Two parameters were modified: the solvents ethanol or hexane were replaced with water and cobalt gets replaced with an alternative bonding agent.



It quickly became clear that the change of the spraying process meant that numerous other adaptations had to be made in the long series of upstream and downstream process steps, e.g. in the mixing of the powder, the pressing process and the sintering.

In the company's experiments with this new technology Betek is not able to draw on any empiric data or test results from other companies in the same field, as Betek owns the first powder spray drying facility that uses new bonding agents and no traditional solvents for the production process. Betek is building up expertise with the new process on its own through step-by-step practical trials and analyses running in parallel in the company's own materials lab. Coupled with this are numerous

practical tool tests in a variety of applications. All of the results are being analysed and documented.

Know-how of inestimable value

When working on such complex interrelationships the inestimable value of the Betek project team's great know-how comes to the fore. Without this knowledge it would not have been possible to make ready-to-press powder right from the word go and also to work this immediately into test tools for road rehabilitation.

In parallel with this we even performed a number of remaining jobs and adjustments

with the plant manufacturer. Managing Director, Karl Kammerer: "We are convinced that with the help of the new technology we shall succeed in the near future to generate wholly new kinds of even more robust, more wear-resistant tungsten carbide formulae. As with all new processes, here too it is a long, painstaking path until products get produced that are ready for the market. The new materials have to first prove themselves out in the marketplace in the toughest conditions of use. Our initial field trials are going extremely well in the areas of concrete milling, asphalt milling, rock crushers, surface mining and TungStuds. That's the only way of achieving our objective." According to Kammerer, for new processes and products too the saying 'Look before you leap' is highly applicable.



PROFI TEST CULTIVATOR BLADES

Five years of intensive development work were followed by a comprehensive practical test by 'profi' magazine. The cultivator blades developed by Betek were thoroughly put through its paces. After 2,500 hectares seven sets of traditional steel blades had been worn away, while the Betek tungsten carbide blades still had enough in reserve to outlast a further two sets of standard steel ones. The Betek tungsten carbide blades proved themselves a worthwhile investment in terms of both cost and efficiency.



Published by farming sector publishers Münster Hiltrup, Germany, 'profi' is a highly renowned magazine covering professional agricultural equipment. It features monthly tractor and practical tests to help farmers come to decisions on investments in machinery. In the tests the equipment gets used under real working conditions over a relatively long period on farms or at agricultural contractors, with the tests being closely monitored by the magazine's reporters.

Fair comparison ensured

The magazine's editor, farmer Dietmar Renfert-Deitermann, wanted to check out the Betek blades and so he put the Horsch tungsten carbide

blade from Betek to the test against the test standard steel blades from Horsch. The 'Zuchtzentrum eG Gleichamberg' (Gleichamberg Breeding Centre) in Thuringia, which covers an enormous area of land, was selected for the test. For cultivation of the land without the use of a plough the centre in Gleichamberg uses a 4-bar Horsch Terrano FG cultivator with a working width of 7.5 metres. The Terrano was pulled by tractor of 450+ horsepower at a working speed of around 12 km/h across the rolling terrain of the centre's own c. 1,950 hectares of arable land and the 1,000 hectares of third-party land. Standard and tungsten carbide blades were systematically divided up on the first two bars – adhering to defined minimum requirements in order to establish a fair comparison. The test is described in detail in the

April 2012 issue of the magazine.

Constant availability a boon

In the case of the Betek blade the cutting edge is formed by an angularly shaped piece of tungsten carbide, which provides outstanding protection against any fracture of the tungsten carbide and very high resistance to wear. The test showed balanced wear between the tungsten carbide and the steel. Neither did the steel body break during the test before the tungsten carbide was worn down, nor did the tungsten carbide on the cutting edge get worn down before the steel body did. Thomas Gundelwein, one of the staff at the 'Breeding Centre' test farm was pleased not to have to change the blades anything like as often as before. Gundelwein: "In addition to the cost benefits at the purchase stage, saving all the time previous-

ly spent eternally fitting new blades and the constant availability of the machines are further benefits."

'profi' tester Renfert-Deitermann acknowledges that the tungsten carbide blades have another advantage yet: while conventional steel blades become appreciably shorter over time, the Betek blades keep their shape and almost their original length throughout the entire period of their use and can thus work the land at the desired depth without the cultivator having to be constantly readjusted. With Betek blades the incision into the ground, the mixing effect and the drawing force remain unchanged. With Horsch tungsten carbide blades from Betek the Terrano FG 7.5 was ready for use without interruption all season long.



Standard steel blades from Horsch



Betek tungsten carbide blade



TungStuds DELIVER WEIGHTY BENEFITS AND INCREASE LOAD CAPACITY



When it comes to cost, many details contribute to success. Betek TungStuds can play a significant part in this. One good example of that is provided by the intended use of Betek TungStuds on the gigantic dumper trucks in the world's second largest copper mine.

Be it raw material deposits, vehicles, machines or figures – for Europeans the dimensions involved are awe-inspiring superlatives: the Grupo Mexico is one of the most important companies in Mexico, Peru and the USA and is one of the largest copper producers in the world – and at the same time has the world's largest copper deposits and with this prides itself on being the copper producer with the lowest 'cash costs' anywhere on earth.

The 'Buenavista del Cobre' copper mine belonging to Grupo Mexico is located in Cananea, in the north of Mexico, two hours from Hermosillo. Here too one superlative follows another: around 400,000 tons of copper ore are mined every day. To help with that they use the largest CAT mining truck: the CAT 797F. The vehicle is around 7 metres high, nine metres wide and approximately 14 metres long. It is not without reason that one test report on the vehicle says: "When you are standing beside it (the truck), you feel about the size of an ant." 47 vehicles of this sort transport the copper ore in Cananea.



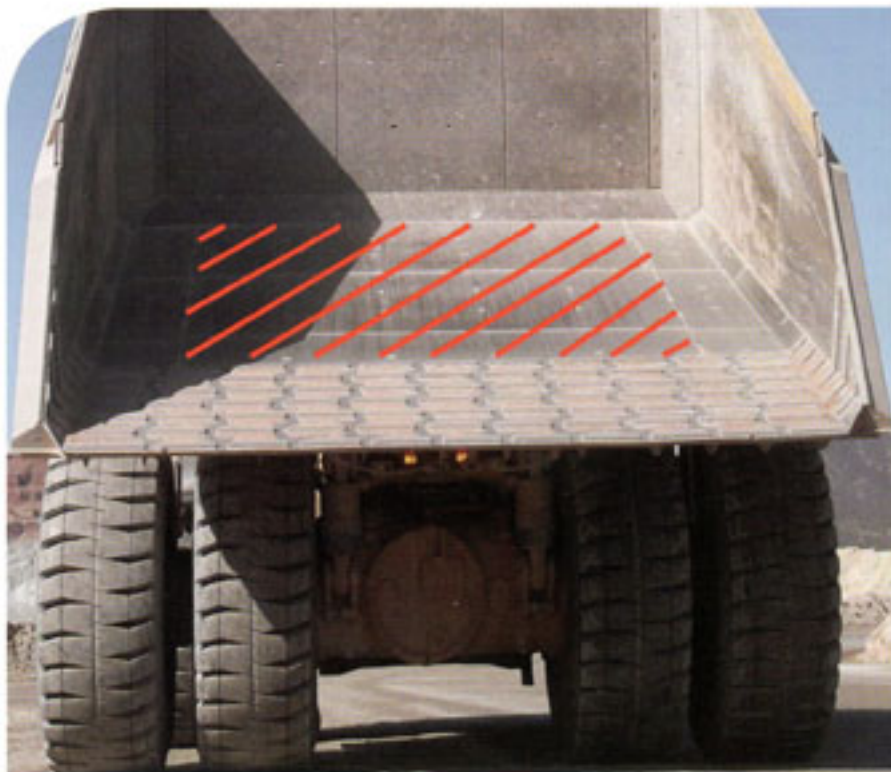
Six large excavators each with six replacement buckets stand ready to load the dumper truck. Betek naturally provides appropriate wear protection for the digger buckets as well: TungStuds contribute here too to increased productivity and longer service life.



Protection against wear carries weight

The CAT 797F provides a variety of dump body options specific to quarrying. The mining truck has capacity for around 400 tons of material and then weighs in total about 650 tons. Wear protection plays a major role on dumper trucks and carries weight: until now the steel welded into the dump body to protect against wear weighed on its own 22.5 tons. However wear protection in dumper trucks can also be provided in a different way!

Betek product manager Pascal Detemple showed the mining engineers a lucrative alternative using TungStuds (see illustration 1). Thanks to the reduction in wear protection steel and the combination with TungStuds it will be possible to reduce the weight due to wear protection by 6.25 tons and to increase the load capacity. Service life should increase threefold, fuel consumption go down and productivity overall be considerably improved. Pascal Detemple: "The solution using the TungStuds will add up in every respect. Every ton that we save in wear protection benefits the material load capacity. And, after all, the dumper trucks are not supposed to carry around masses of consumable steel but to transport the raw material, the copper ore."



The wear protection steel plate is not attached, as was previously normal practice, all over the bucket, but just in the middle. It gets bordered by 49,500 BTS07 TungStuds, pre-welded onto an 8mm Hardox plate. This saves 6.25 tons in weight, which naturally increases the load capacity for the copper ore significantly. The cost per transported ton of copper ore then goes down.



BETEK product manager Pascal Detemple (left) and Rodoifo Jimenez from Betek's Mexican trade partner Construmac plan the TungStuds wear protection solution in



Copper is an excellent conductor of heat and electricity and is used in many diverse ways in industry. The copper ore gets transported using the largest CAT mining trucks. 47 such dumper trucks are on the go in the 'Buenavista del Cobre' copper mine in Mexico.



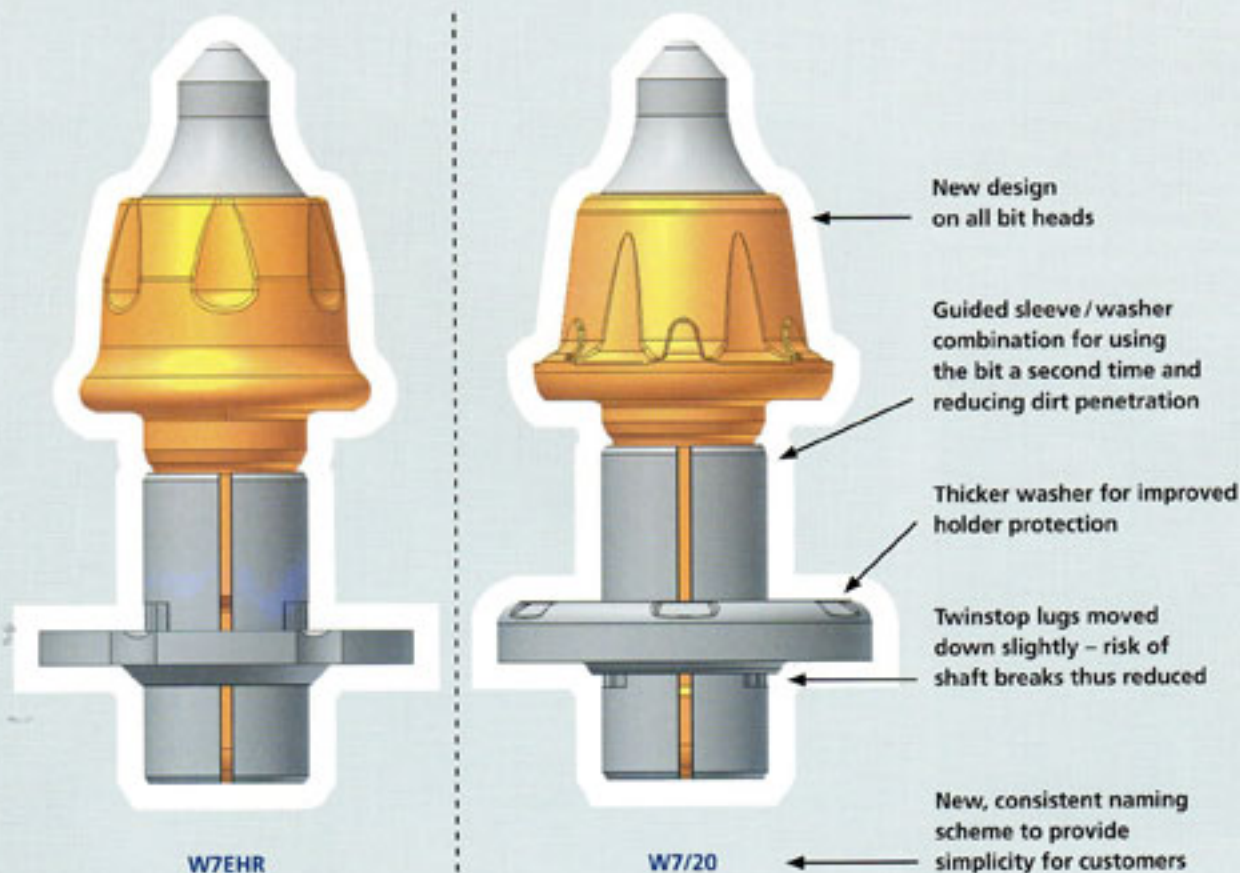
BITS FOR WIRTGEN COMPREHENSIVELY OPTIMISED

The optimisation and increasing size of drilling machines is causing ever-greater demands to be put on bits as well. On top of this comes new material mixes that need to be milled and, of course, the desire for the tools to provide easy handling and a longer service life. In order to offer users further advantages in holder protection and the ease of changing bits, Betek optimised and standardised the complete Wirtgen product range during the first quarter of 2012.

A solid washer for better holder protection was developed and the groove for the sleeve moved down slightly in order to make any broken shafts even less likely. The new washer/sleeve combination also reduces the penetration of dirt into the holder and makes it possible to pre-stress the bit again automatically using Wirtgen's new hydraulic bit ejection

drift in order to make any renewed fitting of the bit easier. The familiar Betek design on the bit head has been slightly modified and all bits have been given new, simplified names. The new names enable the bit and its dimensions / features to be precisely defined for the customer.

The new 2012 features, shown on the W7 bit





Increased service life and resistance to breaks

These changes were implemented for all bits and now offer customers a thoroughly optimised range of bits for every application. On some of the bits the tips were also optimised in order here too to increase the Betek bits' service life and resistance to breaking and to satisfy customer requirements.

In keeping with Betek's 'Progress' slogan, staff from all Betek divisions developed great enthusiasm for this new bit optimisation programme. Over the past months they have worked flat out on preparing the 2012 bit range. The production of every steel blank had to be adjusted in order to stamp in the

new head design and relocate the groove. The complete washer and sleeve production process was adjusted. New tools had to be designed and made and machines refitted or even developed from scratch. Thanks to our reliable suppliers, our tool-making shop and everyone at Betek who was involved in this project we were able to complete it on time.

Initial feedback from construction sites is very positive. All bit types are also available in the new version. Betek has thus once again set itself apart from the competition and is offering an optimum product for applications of every kind.



ORIGINAL WIRTGEN PICKS
FOR HIGH-PERFORMANCE MILLING APPLICATIONS





"IF YOU WANT TO PROGRESS, YOU MUST NEVER STAND STILL!"

The Betek editorial team requested an interview with the company's Managing Director Karl Kammerer. This was to mark his 40 years with the firm and out of interest in how business is currently going.



The first half of the year is already over. How did it go and what's your assessment of the 2012 trading year?

The first half of the year has been mixed. In the road milling division, which is very dependent on the budgets of public authorities, the season was slow to get going. The roads suffered greatly from the hard winter and the road repairs backlog has got even longer. While our clients have processed a flood of tender requests, such requests are not orders. The situation is different in Eastern Europe. For Russia, Poland and the Ukraine we're showing a very good first six months. The anticipated boom for Japan due to clearing up the tsunami damage has, however, not yet materialised.

Most of all the other product areas are doing very well, especially coal mining. After the nuclear power stations get switched off, a gap is created that is being filled by coal. In the excavation field, too, our expectations have been fully fulfilled.

The company ships products from the Black Forest to clients all over the world. Which countries are on the up economically and where do you see opportunities or problems?

The world continues to get smaller. Development in Central Europe is problematic. The construction market in Spain has totally collapsed, followed by Italy. France and Belgium, too, are recording economic slumps. Among the biggest markets at the moment are North America and China. Russia is becoming increasingly important. Development in the rest of the BRIC states, Brazil and India, is disappointing.

I see opportunities in Eastern Europe. I was recently in the Ukraine for three days and we felt a real spirit of optimism there. Three important things are on the up and up: raw materials, energy and agriculture. This region will also benefit from climate change. That applies to the east of Russia, too.

And what's your view of China?

Due the reluctance to issue credit by Chinese banks, who in order to minimise any risk of default have preferred to give credit to state-run firms, there have been huge difficulties in funding infrastructure projects. Last year the situation escalated and all infrastructure projects were stopped. Now that the banking system has been restructured, we anticipate things picking up again this autumn. If only cautiously. There is a change of government imminent in China. In the period prior to such change, spending on projects is traditionally held back in order to leave the next government with projects to subsidise. In the case of road building the five-year plan is in its se-

cond year and budgets are generally not used up in China until near the end of the five-year period.

However, China is not only a sales market for Betek, but also an important raw materials supplier. Is the price explosion and shortage of some raw materials affecting Betek?

Yes, especially as China possesses the largest tungsten deposits and global demand for this is high. The country's government has greatly restricted the export quota and retrospectively reduced planned export volumes. The risk of shortages is high. We are already increasingly using recycled tungsten. Going forward, the proportion will rise further in order to avoid any dependency and to enable us to continue to supply tungsten carbide of the highest quality.

2012 is a special year for you: you've been involved with the Simon Group and Betek for 40 years. What has changed and what has remained the same over that time?

The business world and business processes change incredibly quickly – and you've naturally got to keep adapting. What won't change is the personal contact with customers, staff and suppliers. That is the only way to spot problems before they arise.

If you were able to decide on your choice of career again, what career would you choose?

The same one – I can't do anything else!

What defines how you operate as a businessman?

Swabian characteristics like hard work, imagination and innovation play just as much of a leading role in that as personal responsibility, sincerity and loyalty. I also demand of everybody something that should actually be seen as a given: that they show respect for other people and the environment. Dedication is also something that I think is important. Plus, I try to live by example and do that which I expect of my fellow man.

How can success be kept going for years or even decades?

By constantly putting existing products to the test and always being open to new ideas. It's incredibly important to hone all your senses and to listen to what customers say. Only then can you learn what the market needs. It's not the Managing Director that determines the product range, it's the market. It's all about being on the ground and looking to see where customers have a problem. You have to keep finding out what the market needs. Everything else is secondary. That's also where I see the strengths of a medium-sized business like Betek. We don't pigeon-hole our customers. Instead we look for the appropriate solution for each and every one.

What motivates you?

Why do I do what I do? My primary objective is satisfied customers, employees, suppliers and shareholders. Only when they are satisfied am I satisfied too.

Are there any milestones over these 40 years that have moulded your personality or that continue to do so?

My mental approach was moulded by the entrepreneurial style of Peter Simon, the son of the founder of the Simon Group. He said to me one Friday lunchtime over thirty years ago that he had a good feeling about a new family of products and gave me the weekend



to consider whether I would like to lead that division. He had given me – with this 'good feeling about a new family of products' – the opportunity to build up Betek from scratch. Today, Betek is part of the Indus family and I'm experiencing here as well great trust and the farsightedness to support the operational managers not only in their everyday work but also on visionary projects. I am grateful for both experiences.

What advice would you give to young managers – regardless of whether their role is technical or commercial?

Spend less time at your laptop and more in front of your customers!

We read in this issue of Betek News about trials with alternative bonding agents. What prospects do you see for such 'alternative' approaches?

We have taken a leap of faith here without knowing what opportunities and products may emerge. The results, however, are feeding our hopes of once again being able to significantly push back the boundaries of tungsten carbide characteristics. This opens up undreamt of opportunities for our customers. With the complete availability of our new production line Betek has arrived at another exciting point in the company's

history. Being created at the moment using the new process parameters are innovative tungsten carbide formulae and new kinds of possibilities for intricately influencing tungsten carbide properties and adapting them to the respective application. This long-term project, which incidentally enjoys top priority, is presenting our entire team with whole new challenges and also enormous opportunities and calls for all of our experience in tungsten carbide materials.

What innovations are keeping you busy at present?

The attempt to utilise diamond, which possesses fantastic properties, for applications with our bits. We can see that a fair deal of development is still needed. And in any case we will only market any products when they are up to the tough demands of everyday use. And that means that they have to be just as reliable in permafrost as in great heat.

Many thanks for the interview. To finish off, please now complete this sentence: If you want to progress, ...

... you must never stand still!



FROM AICHHALDEN TO AUSTRALIA AND BACK: WITH NEW FINDINGS AND GOOD IDEAS FOR BETEK IN HIS BAGS

To develop a good solution the Betek product managers are always prepared to go the extra mile. On this occasion that meant going from Aichhalden to Australia in order to perfect the bits for a Wirtgen surface miner. Six weeks later, junior product manager Christoph Haberstroh returned armed with new findings and good ideas. The result is called the BETEK WSM-27-42-85-VPH.



The Fortescue Metals Group (FMG) is an Australian company based in Perth and is one of the country's largest producers of iron ore. The mines owned by FMG include Cloudbreak Mine and Christmas Creek Mine. Wirtgen surface miners are used at both to extract iron ore.

"We wanted to develop the best solution for the client," recounts junior product manager Christoph Haberstroh, giving an insight into his working routine, which is one of great variety and considerable responsibility. "Before I set off, we had already worked intensively on the requirements placed on bits in iron ore extraction and further developed two bit types, which were then specially produced for the test. We then sent these two bit versions off to Australia." Christoph Haberstroh

followed them. For him it's all part of the job to monitor such a test on site – no matter where the mine is!

In this case in Australia. "We tested the bits in great detail on the surface miners as they worked for six weeks on extracting iron ore at the Cloudbreak Mine." Haberstroh, an enthusiastic engineer, personally worked with the 'bit team', which is responsible for tool changes. "That gives you a good feel for the

product itself – in that way I know at once what the people are talking about.” Once the 26-year-old had become familiar with the on-site conditions, he knew what bit properties needed to be improved in order to reduce machine downtime to a minimum. In order to be even better in iron ore extraction one of his recommendations was to shorten the collet sleeve. The highly wear-resistant tungsten carbide plating is now also being used more efficiently in order to counter steel erosion.



The result of intensive development: the new Betek WSM-27-42-85-VPH bit for Wirtgen surface miners offers significantly longer bit life and thus reduced machine downtime. Further impressive features include better handling during bit replacement and a practical means of identifying wear.

Best possible holder protection and cutting capacity

“We succeeded in making handling of the bit significantly better and in creating a good way of identifying wear. We also achieved the best possible implementation of holder protection and cutting capacity.” Haberstroh is only satisfied when his customers are satisfied and with this solution he achieved his goal. The people at partners Wirtgen are impressed by the high productivity and the long machine running times.

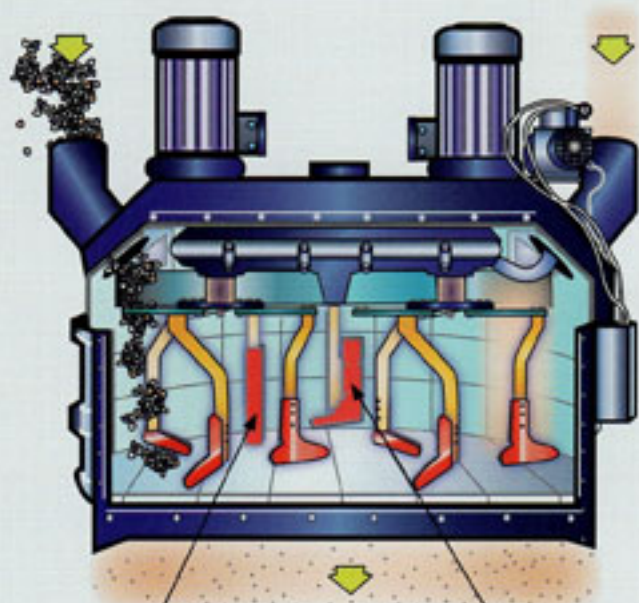


Betek product manager Christoph Haberstroh worked with the team at the iron ore mine for six weeks in order to closely monitor every step of the surface mining process.



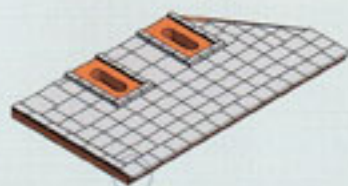
TUNGSTEN CARBIDE WEAR PROTECTION SHAKES UP MIXER MARKET

Building and ceramic compounds are manufactured in mixers, which come in a wide range of types. What they all have in common is that they process one or more constituents to form a homogeneous compound. Mixers are exposed to a high degree of wearing. Now BETEK is launching special wear parts that are causing a stir on the sector of batch mixers.



1. Carbide agitator

2. Carbide scraper



When concrete or ceramics are mixed, e.g. for kitchens or bathrooms, there is abrasion on the tools and in the chambers of batch mixers. In these mixers, agitators (illustrated) fitted with additional carbide bits yield a homogeneous mixture in the fastest of times.

BETEK has developed carbide solutions that protect against wear specifically in this mixer type. These solutions consist of flat carbide plates or moulds bonded to the steel substrates. The transitions between the carbide plates present smooth surfaces, and therefore little opportunity for the mixed compound to cake there, minimising colour variations and foreign inclusions in the ready made ceramic products. A uniform colour and surface are of paramount importance, particularly on light coloured materials for e.g. kitchen worktops or washbasins.

So BETEK tool solutions not only ensure the quality of the final products, they also raise productivity when these products are being mixed.



Standard scraper blade after use: premature failure caused by defect brazing



Detail

Product Manager Bernhard Moosmann knows the market requirements inside out: "Minimised, smooth transitions between the carbide elements present a very small area where the mixed compound can cake. There is therefore very little material that can dry in the grooves and contaminate subsequent batches. There is also less cleaning work between batches. The maintenance interval for a plant fitted with BETEK tools (illustrated) is at least four times longer than conventional solutions!"

DIAMONDS ARE FOREVER?

ON THE TRAIL OF "EVERYDAY" MATERIAL COMBINATIONS

Diamond is considered to be the hardest material that can be synthesised. As early as 1987, BETEK conducted tests on diamond tipped tools in a French coal mine. BETEK could prove both the high wear resistance of this material – and its tendency to fail under greater cutting stress.

Polycrystalline industrial diamond (PCD) is an extremely hard aggregate of bonded diamond particles that is manufactured by so called HPHT (high pressure / high temperature) sintering on special plant. This process produces only a few workpieces per batch, making this material very expensive.

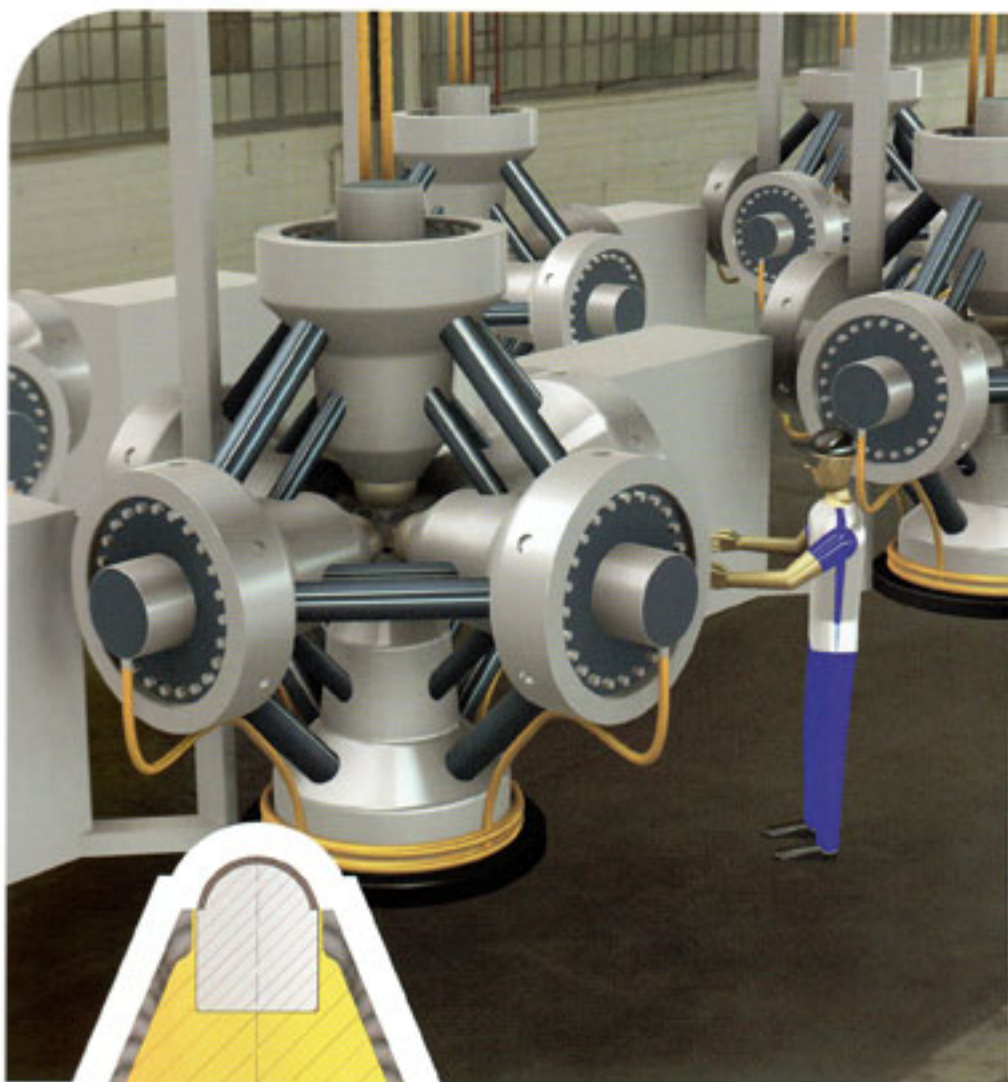
PCD is considerably harder than steel and even harder than carbide, but it is brittle and far less resistant to temperature than tungsten carbide. These properties mean that PCD must be applied to a substrate, generally of carbide. A special process bonds the diamond lining to the substrate under high temperatures and pressures.

BETEK subjected PCD/carbide tools to intensive testing in coal mining as early as 1987. This material combination proved highly successful when cutting pure coal. When, however, the coal seam presented surrounding rock, e.g. sandstone, the test tool could no longer be used economically.

A higher economic efficiency can be obtained on diamond tools when they are used to drill for crude oil or natural gas at great depths. In this case, the higher tool costs are more than offset by the maintenance costs.

What requirements must be fulfilled in other applications?

For example, road milling – The PCD/carbide tips used to date are suitable only for cutting the topping. At greater depths, these tools fail. BETEK has taken up this engineering challenge and is concentrating on optimising the properties of these diamond tools, e.g. their thermal rating.



Production plant for industrial diamond



BETEK diamond tipped mining tool



FRESHLY PRESSED: TUNGSTEN CARBIDE PRODUCTION OF THE FUTURE

Investments in carbide presses had to consider whether these were to be mechanical, hydraulic, or electric plant. The options were many, and BETEK was faced with the question of which of these three technologies could provide the best advances. The requirements specification for the new purchased powder press gave top priority to maximum precision, speed, and energy efficiency. These requirements were joined by market demands for complex carbide tool geometries.



The features of the new powder press: compact, economical, and highly precise



Jochen Kern and his carbide team mould the powder on ultra modern plant.

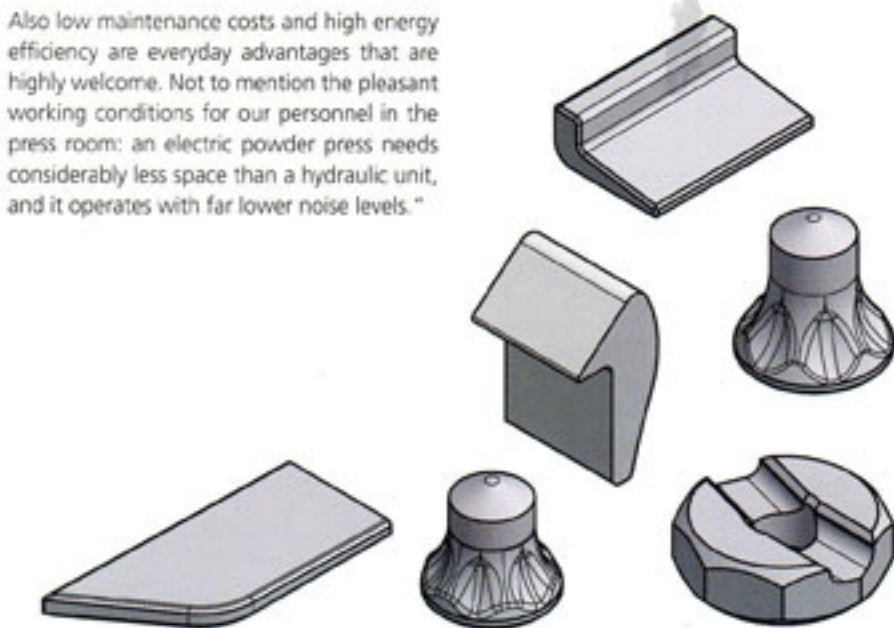
The BETEK carbide production team based the decision to invest on a systematic comparison of the technical data obtained from the press principles available on the market.

The decision went to the Dorst EP 30 electric powder press, the ideal answer to the BETEK requirements profile.

This powder press combines the advantages of mechanical and hydraulic presses. It works quickly, precisely, and efficiently, and each of its axes can be configured with the greatest flexibility – ideal for pressing the complex geometries of our green compacts.

Team Leader Jochen Kern: "This choice of electric powder press offers BETEK a concept that can be expanded to optimal effect in the coming years. Generating 30 t of press force, this system caters to a pressure range that we need for the vast majority of our products. Output and quality are key criteria.

Also low maintenance costs and high energy efficiency are everyday advantages that are highly welcome. Not to mention the pleasant working conditions for our personnel in the press room: an electric powder press needs considerably less space than a hydraulic unit, and it operates with far lower noise levels."



The new plant can press parts with complex designs and integrated radii and surfaces.



CONQUERING THE TURKISH CRUSHER MARKET WITH HIGH STANDARDS OF QUALITY

Based on a conviction to produce and sell only high quality products, Yasin Duran has succeeded in making his company, Seytas, into one of the leading manufacturers of crushing machines in Turkey. This philosophy fits in with Betek perfectly – the consequence of which is a partnership in Turkey between Betek and Seytas.

Seytas makes crushing, sieving, conveying and washing machines and employs around 150 people in Ankara and the surrounding area. The company's product portfolio in the crusher sector encompasses vertical shaft impact (VSI) crushers, horizontal shaft impact (HSI) crushers and jaw crushers. Seytas is predominantly known for its VSI crushers. In the view of Betek key account manager Baris Irmak Seytas crushers and Betek wear tools complement each other perfectly: "Each rotor is fitted with nine tips. We have developed and successfully launched the BBM 71 rotor tip specifically for VSI crushers. Test results show that it achieved an increase in productivity of between 35 and 55 percent compared to the previously used tips." This success is spurring Betek and Seytas on to jointly develop more tools for various types of crusher, says Baris, who expects to see some initial results from this in the autumn.



With its crushing, sieving, conveying and washing machines, Seytas is also active in other countries of the Middle East and in North Africa.

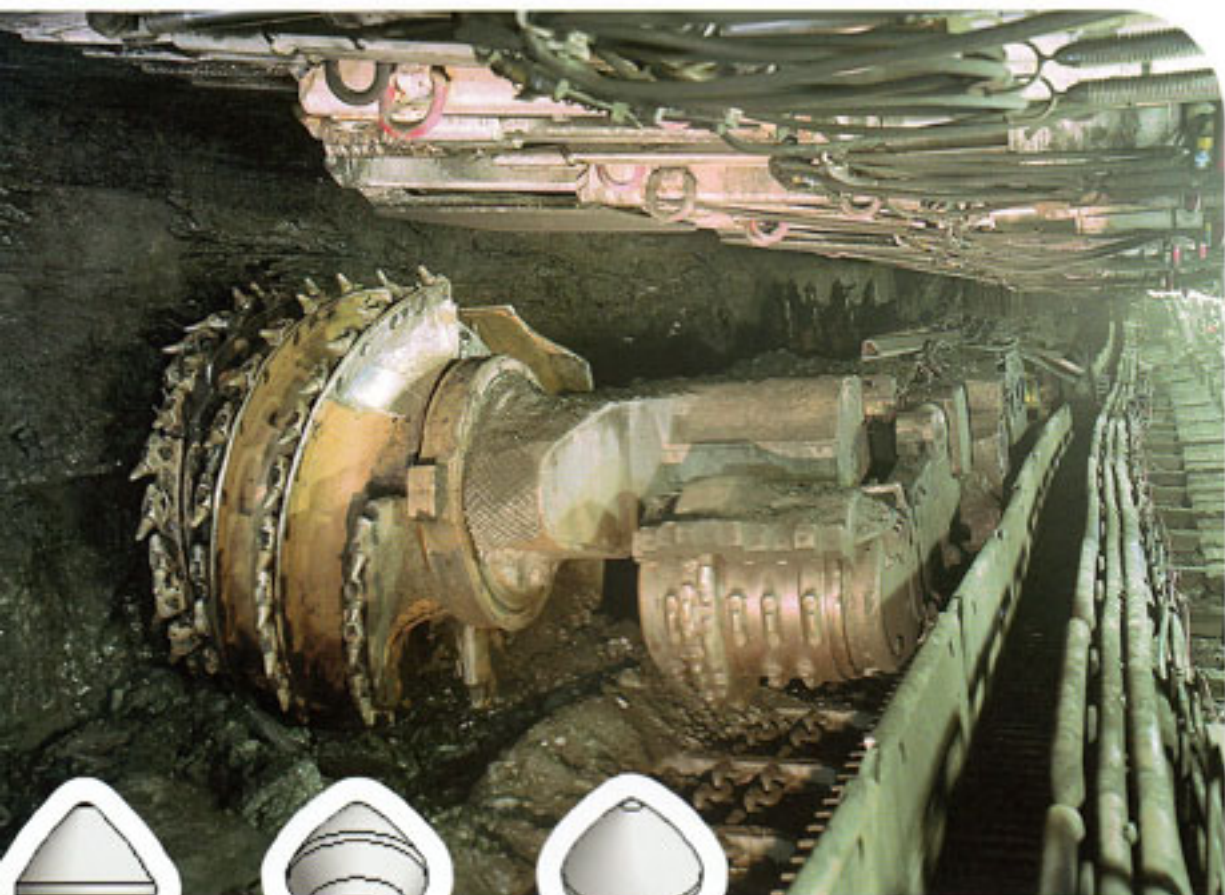


The first stage in the joint story of success is the Betek BBM 71 rotor tip, which has been developed specifically for vertical shaft impact (VSI) crushers.



Seytas chief executive Yasin Duran has been working in the industry for 18 years and set up his company, Seytas, five years ago. Within those five years he has succeeded in becoming one of the leading crusher manufacturers in Turkey.

CP TUNGSTEN CARBIDE: PROGRESSING WELL WITHOUT CREATING DUST



In underground mining particularly difficult conditions prevail. Coal mining in particular makes great demands of man and machine. It is very important when mining coal that dust formation is kept as low as possible in order to minimise the risk of coal dust explosion – a much-feared explosive reaction in coal mining between coal dust powder and oxygen in the air. This is the strong point of the new Betek CP tungsten carbides. CP stands for cap pin, the name drawing on the form and geometry of the tungsten carbide. With their

slim bit shape, Betek tools made of CP tungsten carbide excel through low levels of dust formation and thus contribute to safety. They are cost-efficient, make optimum use of the tungsten carbide content and have a low level of energy consumption. By virtue of their slim head shape the proportion of coal dust gets reduced, they penetrate excellently into the material and have a high cutting force – thanks to even wear, they also continue to cut well.





BAUER TAMES HONG KONG'S GEOLOGY USING BETEK BITS

In commissioning the building of the Guangzhou-Shenzhen-Hong Kong Express Rail Link, the Hong Kong authorities have presented the construction firms with a very special challenge: space on the construction site is very limited, while the number and scale of the machines are impressively large. Betek partner company Bauer Spezialtiefbau GmbH is making the diaphragm walls for this project and is on site with a formidable fleet of machines.

The ambitious construction project, which includes not least 26 kilometres of tunnels, various ventilation shafts, accommodation and rescue buildings, was begun in 2010 and is due to be finished in 2015. It is a very important project, as it connects Hong Kong to the national 16,000-kilometre high-speed rail network and strengthens Hong Kong's position as the southern gateway to China. It simultaneously achieves the economic and social integration of the cities in the Pearl River Delta and also with the mainland. For the people this brings many benefits, including an enormous saving in time. With this new high-speed rail corridor the travel time from Guangzhou to Hong Kong, for example, will be halved: instead of 100 minutes, people making the journey will need just 50. However, until that day comes there is still a great deal to do on the building site.

The excavation specialists from Bauer in Schrobenhausen have six milling machines, six grabbers, three BG 40 drilling machines and one BG 48 drilling machine with them on site. One of the milling machines is the biggest that Bauer currently operates. Christoph Schröppel, responsible for project services and machinery at Bauer, describes the situation: "We are working our way through the extremely variable geology with rock hardness of more than 250 N/mm². We're working on diaphragm walls along a length of 1.8 kilometres. The gap between the walls and thus our working space is all of 30 metres wide. The whole 1.8 kilometres are not open all at the same time, so in terms of logistics in the 'construction site jungle', which besides our machinery also includes 13 cranes, 25 cable excavators and six other drilling machines, it gets incredibly challenging."

Along the 1.8-kilometre stretch Bauer is installing around 110,000m² of 800 to 1,200mm diaphragm walling at up to a depth of 48 metres. As ever, time plays a major role and in order to make good progress it is essential to minimise machine downtime. To this end the



Bauer milling and drilling machines are fitted with Betek tungsten carbide bits. Betek is providing such bits for this project in a variety of versions and diameters. Betek product manager Thomas Neff: "This enables Bauer to pick the optimum bit for their needs." This is appreciated by Christoph Schröppel: "We

value this collaboration. Everything is going very reliably and very well, which for us is very important on such projects, as – after all – we've never had so many milling machines on one construction site before! For us too, Hong Kong is a special site."



SHAPING THE COMPANY FOR 40 YEARS

– KARL KAMMERER



Nobody has shaped the company's development more than Karl Kammerer. The Betek and Simon Managing Director, who otherwise always leaves the limelight to his staff, was himself the centre of attention in May: celebrating 40 years of successful management of the tradition-steeped Black Forest company. There was a large gathering of well-wishers and all agreed: "The boss always has an open door for us all." In addition to Managing Director Bernhard Zimmermann, works council chairman Lothar Hug and Dr. Johannes Schmidt, a member of the Indus Holding AG board, also expressed their ap-

preciation and congratulated Mr Kammerer on this rare anniversary. That for Kammerer his role was not a job, but his life's work, was confirmed by all.

He himself is still forging strategies to take Simon and Betek into the future. His thanks went to all: "I would like to thank all our employees, partners, Indus Holding and Peter Simon, who gave me the opportunity to build Betek up from scratch."

WELCOME TO THE SIMON GROUP +++ WELCOME TO BETEK +++
WELCOME TO AICHHALDEN +++



Gerhard Hofmann is a new member of the product management team. He will be responsible for tunneling. A graduate of mechanical and industrial engineering, he comes from Bitz and is 56 years old.

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