KOMPTECH

magazine 1/2015

GREEN EFFICIENCY®

LESS NOISE, MORE SOUND

PRACTICE

A PROMISE IS A PROMISE

INNOVATION

THE NEW MULTISTAR L3

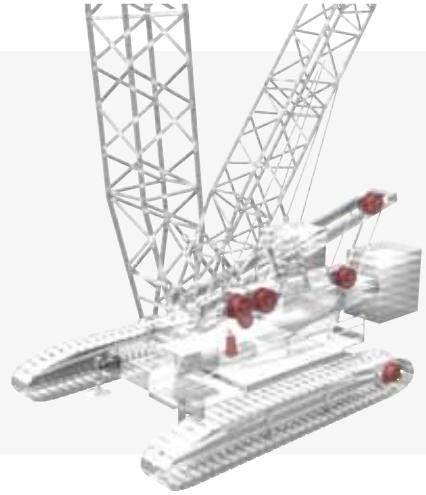
KOMPTECH PRESENTS:

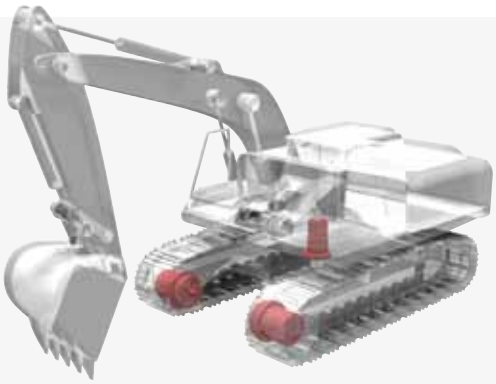
Even when we're moving the world, we're a step ahead.

Today O&K Antriebstechnik is one of the world´s leading producers of planetary drives. As a competence centre within the Carraro Group, the company develops, manufactures & offers a full-range of final drives, slew drives, cutter drives for mobile applications as well as drives for winches, walkways and escalators.

Ever shrinking dimensions enable the units to be installed wherever space is of the essence, but moreover O&KA is capable to supply the biggest drives ever realized in the world, adapted for largest mining shovels and tracked cranes.

Which is why a dedicated team of engineers and our worldwide manufacturing bases are ready to design global supply solutions in partnership with our customers. This is what makes O&KA not just a supplier of drives, but a provider of solutions. And this is what keeps us ahead of the field.





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Page-one story

Peter Hørlev is very satisfied with the Axtor 8012.

A PROMISE IS A PROMISE

When you promise lower consumption with higher performance, you're making a very bold claim. And customers are going to keep a very close eye on you. Like Peter Hørlev of the Swedish company RGS 90 Sverige AB.

As a former fireman, Peter Hørlev is used to tough jobs. Father of two daughters and a passionate race driver and Formula 1 fan, Hørlev is Chief of Operations at RGS 90 and responsible for some 20 employees at seven locations throughout Sweden. The company has public and private-sector customers, and over half of its business is in treating contaminated soil. The rest is shredding and screening waste, compost and biomass. RGS 90 also treats construction waste and other woody waste.

A LARGE MACHINE PARK

A company that offers all those services needs an extensive machine park. "We have almost 30 machines in use, including three Nemus drum screens, two Terminators and an Axtor 8012," says Hørlev. "In addition to our facility in Malmö we also operate in Hässleholm, Göteborg, Nörrköping, Stockholm und Örnsköldsvik. With all these many different kinds of materials, our machines naturally need to be easy to operate and maintain," he adds.

PROMISE KEPT

Hørlev is especially happy with the Axtor 8012. "We really like the throughput, low fuel consumption, easy maintenance and simple access," he says. "Compared to our CBI shredder it has the advantages of universal use as a shredder or chipper with just a short conversion time. Plus, the Axtor keeps the promise Komptech made. It has lower consumption and higher performance," Hørlev continues. "It's also important that the machine make less noise, despite the higher performance. That's a big advantage for a service provider working at multiple sites."

RGS 90 Sverige AB

GOOD SCREENING IS HALF THE GAME

He also has high praise for the Nemus. "The Nemus is a very good machine. It's simple to operate and maintain, and has easy access."
One big advantage is the fact that it can use competitor drums.
"Our first Nemus worked for several weeks with a screen drum from a Doppstadt SM620. Conversion was really easy and fast," says Hørlev.
It's nice to hear all the praise – and it spurs us on to make sure we keep the rest of our promises.

Rickard Persson (left) and Claus Benzin together are BEPE K&S.

BEPE K&S – our new partner in Sweden

Since the middle of the year BEPE K&S has been the new Komptech sales partner in Sweden. The company is headed by Claus Benzin, long a Komptech partner in Denmark, and Rickard Persson, who also has extensive experience with Komptech products. An interview with Claus Benzin.

Why have you expanded your sales territory to Sweden?

We've already been selling Komptech products with great success for 15 years in Denmark. When the opportunity came to add Sweden to our territory, we took it for several reasons.
For one thing it expands our market from just under six to fifteen million people. For another, now we can purchase Komptech products and spares in larger quantity and thus at better prices.
We have a very lean organization, since we work from Rickard Persson's home in Helsingborg and our Danish locations. So most employees know the Komptech products and have experience in the waste and biomass sector. At Aksel Benzin we've already been at work in Sweden for five years. A good customer, RSG 90, started a company and bought several Komptech machines that work at facilities in Sweden. We've been providing service for the machines for six years, and RSG 90 is very satisfied. So we're quite confident that we can be successful in this market.

What has happened thus far?

My partner Rickard Persson and I officially started the new company BePe in July 2014. We invested in the creation of a new website and a Swedish customer magazine called "TANK." And we put on a big demo event in Hässleholm where we showed how a Terminator 5000, a Crambo 5200, an Axtor 8012 and a Nemus 2700 work on biomass and demolition waste wood. We've hired a salesman, Martin Grönwall, who has already sold his first machine. Martin knows his way around the business and in fact used to sell Komptech products a few years ago. We're also going to hire more people in addition.

What are your plans and goals?

Right now we're doing a demonstration tour of selected customers in Sweden, using our Komptech demo machine fleet. Customers expect to see the machines working their own material. Martin visits customers every day, so by the spring of 2015 we expect to sell three or four more machines. We've very upbeat about our future in Sweden. The Swedish economy has recovered and our customers have a very optimistic outlook.

http://bepe-ks.se/

BEPE®

THE VIENNESE CIRCLE

In a Viennese waltz it's good form to turn a perfect circle. Just like in Vienna's waste disposal, where there's also a perfect circle of organic material. The Lobau compost facility is the central point, and recently it got a makeover.

On the outskirts of Vienna, in an idyllic bottomland setting, this compost plant turns 100,000 tonnes of organic and green waste into compost each year. Upon arrival waste is shredded, screened to remove contraries, and then piled in open windrows for composting. After eight to ten weeks the material is screened. Following a final curing phase the compost is ready for sale. Thus, the waste that comes out of the city goes back to the city as a valuable soil improver.

COMPOSTING FOR THE CLIMATE

Back in the 90s Vienna started to move towards the responsible use of biogenic resources. As a result, today the city can boast a modern composting plant, a biogas plant for food waste and wet organic waste, and a biomass-fired power station. Biomass and biogas are climate-neutral energy sources. The compost, which bears the Austrian compost quality seal, is a soil improver that replaces artificial mineral-based fertilizer. Josef Thon, who is in charge of Vienna's waste disposal, street cleaning and vehicle fleet department, puts it succinctly:

"We don't just hand our waste over to somebody else like many cities do. We take care of it ourselves, so that it is treated using what we consider to be the best methods. In Vienna, something that is a problem for other cities is now a quality product."

GOOD REASONS TO SORT

Reinhard Siebenhandel is behind this high compost quality. As director of the waste treatment and material stream management department, he is always working on ways to improve processes, and watches with Argus eyes over the material that enters the system. "The quality of the incoming material has a major influence on the final product. If we repeatedly find things in the organic waste containers that don't belong there, those batches don't go to composting but to anaerobic digestion or incineration." There is a good reason for this rigorous sorting. For some years now, the compost operation has turned out a complete, ready-mixed turf-free product called "Good Earth" in cooperation with a private soil maker. Packed in handy sacks, this environment-friendly soil can be purchased at public collection points throughout the city.

"FROM ORGANICS BIN TO FLOWERBED"

Uli Sima, Environmental City Councilwoman

The right technology

The new processing line with Komptech drum screen.

An unbeatable team

City councilwoman Uli Sima and MA48 boss Josef Thon with their team.

City Councilwoman Uli Sima is proud of the functioning biogenic waste cycle of this major city. "From organics bin to flowerbed - that motto helped us make it clear to everyone how sustainable waste disposal works. Offering a finished soil that is easy to use on patios and balconies paid off. Sales have grown noticeably from year to year."
Supplying Viennese organic farmers with compost is another important function of Vienna's organics recycling. With about 1000 hectares in cultivation, the City of Vienna is one of Austria's largest organic growers.

THREE GENERATIONS OF TOPTURN

Since its opening, the Lobau facility has been both treating and composting waste. Facility director Christian Fischer must stay on top of the seasonal variation in type and volume of input material, as well as the effects of sun, rain and snow on the outdoor windrows. For years, Topturn compost turners have been important tools. The new Topturn X55 is the third generation of Topturn to work at Lobau, and works alongside its predecessors, including one machine with over 10,000 operating hours.

"The machine has improved with each generation," says Fischer, "and I can tell that many of the things our drivers suggested have been incorporated into the design." Green technology, in this case painted orange, can also be found in the prep line where a stationary Komptech drum screen separates out contraries.

When Christian Fischer and his team start to get tired after a long working day, perhaps the thought that their compost is making a valuable contribution to a better environment gives them a little bit of renewed motivation.

A product in demand

"Good Earth" compost soil

Department 48 of the City of Vienna

Waste avoidance, waste separation and a clean city are core goals of Vienna's Department 48.

The Lobau compost facility
Commissioning: 1991
Area: about 5.2 ha
Plant throughput: about 100,000 tonnes per year

Komptech machines:
Topturn X55 compost turner with lateral displacement device,
Topturn X53,
stationary drum screen

THE BEST SOLUTION

The modernization of an existing system is typically a difficult task. But Komptech has demonstrated its capabilities in numerous such projects. A close-up look in Grudziądz, Poland.

Waste disposal company Zakład Gospodarki Odpadami in Zakurzewo is located about 15 kilometres from the centre of Grudziądz, a former military training ground.
A company called Miejskie Wodociągi i Oczyszczalnia Sp. z o.o. bought the facility, and decided to determine its potential and whether it could continue in operation.

EXTENSIVE STUDY

Some investments were required in order to keep the plant running. Furthermore, the intention was to turn it into a regional waste treatment facility in accordance with the plans of the Kujawsko-Pomorskie regional government, which made extensive modernization necessary. In fact, the costs were so high that the company decided to apply for outside funding for the project.

In November 2010 the European Regional Development Fund agreed to fund the "Zakurzewo Landfill Modernization" project. In addition to overhauling the existing sorting line, the project also involved the construction of a mechanical-biological treatment system and a treatment line for waste-derived fuel. Polish Komptech distributor Agrex-Eco placed two bids for the project, and both times the bids were identified as the best and most advantageous. Ultimately, Agrex-Eco supplied four Komptech machines – a Crambo 5000 diesel-powered shredder, a Topturn X53 compost turner, a Maxx Integral drum screen and a Mashmaster 1300SE universal mixer.

The facility in Grudziądz is full of dark green machines.

TOP PRODUCT QUALITY

"The composting process is greatly accelerated by the use of Komptech machines, and the final product is a top-quality soil improver," says Jakub Dreszler, head of the biological waste treatment department.
"In the near future we plan to expand the Zakurzewo plant, especially the biological waste treatment section. With the good performance of Komptech machines we look forward to continuing to work with Agrex-Eco and Komptech. We also hope to compare notes to further improve the composting process," adds Deszler.

The facility has already been officially opened.

CRIBUS TRIO

Graham Andrews is proud of his long association with Komptech.

TMA Bark Ltd.

Processing 350,000 cubic metres of green material per year, TMA Bark Ltd is Komptech's biggest UK customer. In September the bark, biomass and compost supplier strengthened its 15-year relationship with Komptech by investing in two new Cribus 5000 drum screens, meaning TMA now has three on their Norfolk site.

After starting its green material processing operation in 1998, TMA has grown to a size that saw the company turn over almost 8 million euros in 2013. The latest additions to TMA's fleet join a wide range of Komptech equipment used on site, including one Crambo 5000 shredder, one Topturn X60 compost turner, two Mustang drum screens, one Hurrikan S wind sifter, one 25/90 stationary drum screen, and the original Cribus 5000.

GROWING RELATIONSHIP

Graham Andrews, Managing Director at TMA, spoke about the origins of the firm's relationship with Komptech: "We were first asked to process green waste in 1998 by the local authority.

Seeing great potential in this business opportunity, a colleague and I went to the Recycling and Waste Management exhibition in Birmingham where Komptech had a stand. We were immediately impressed with the machines, purchasing a drum screen and wind sifter the same day. Our on-going partnership has meant that we have progressed to owning nearly every type of machine in Komptech's range."

CRIBUS SOLUTION

Graham explained the impact the Cribus had on TMA's operation: "The first Cribus 5000 drum screen came to us last year as a loan machine. This was due to picking up a big order that we were unable to

tma

www.tmabark.co.uk

process with our fleet at the time. Its arrival immediately had a positive effect on our site, and so we kept it. This summer we invested in two more units which has greatly increased our operation's flexibility, enabling us to meet the growing demands of our customers."

GREEN EFFICIENCY

The productivity and fuel efficiency of the Cribus 5000 has impressed Graham: "The throughput on the Cribus is higher than on any other mobile drum screen I have ever seen. We're improving our processes and getting results that we had never been able to achieve before.
The hybrid drive electric generator has led to a dramatic reduction in our fuel costs, which has in turn reduced our overall daily running costs.
This has also meant we have been able to remove much of the hydraulic piping from our site."

Looking ahead, Graham closed by stating: "We're really happy with our Komptech machines, and look forward to continuing our strong relationship with them in the future." ■

green efficiency IN PRACTICE

Graham Andrews reports on his experience with the Cribus 5000, saying that with it Komptech has taken the green efficiency® slogan "Less fuel, more power" to a new level. Not only does it have 30 percent higher throughput than the old Magnum TMA was using, it also only needs a third of the fuel. Thus, the specific consumption of the Cribus 5000 is only about 25 percent of that of the Magnum. That alone saves Graham Andrews about €20,000 in fuel costs per year. And it also reduces the environmental burden.

Three Cribus drum screens are at work at TMA Bark Ltd. in Norfolk.

DESIGN MEETS FUNCTION

"Good looks are very important, especially for large industrial machines," in the opinion of designer Johannes Scherr. A discussion of his interesting design approaches and his latest project, the new Komptech Multistar L3 star screen.

Page-one story

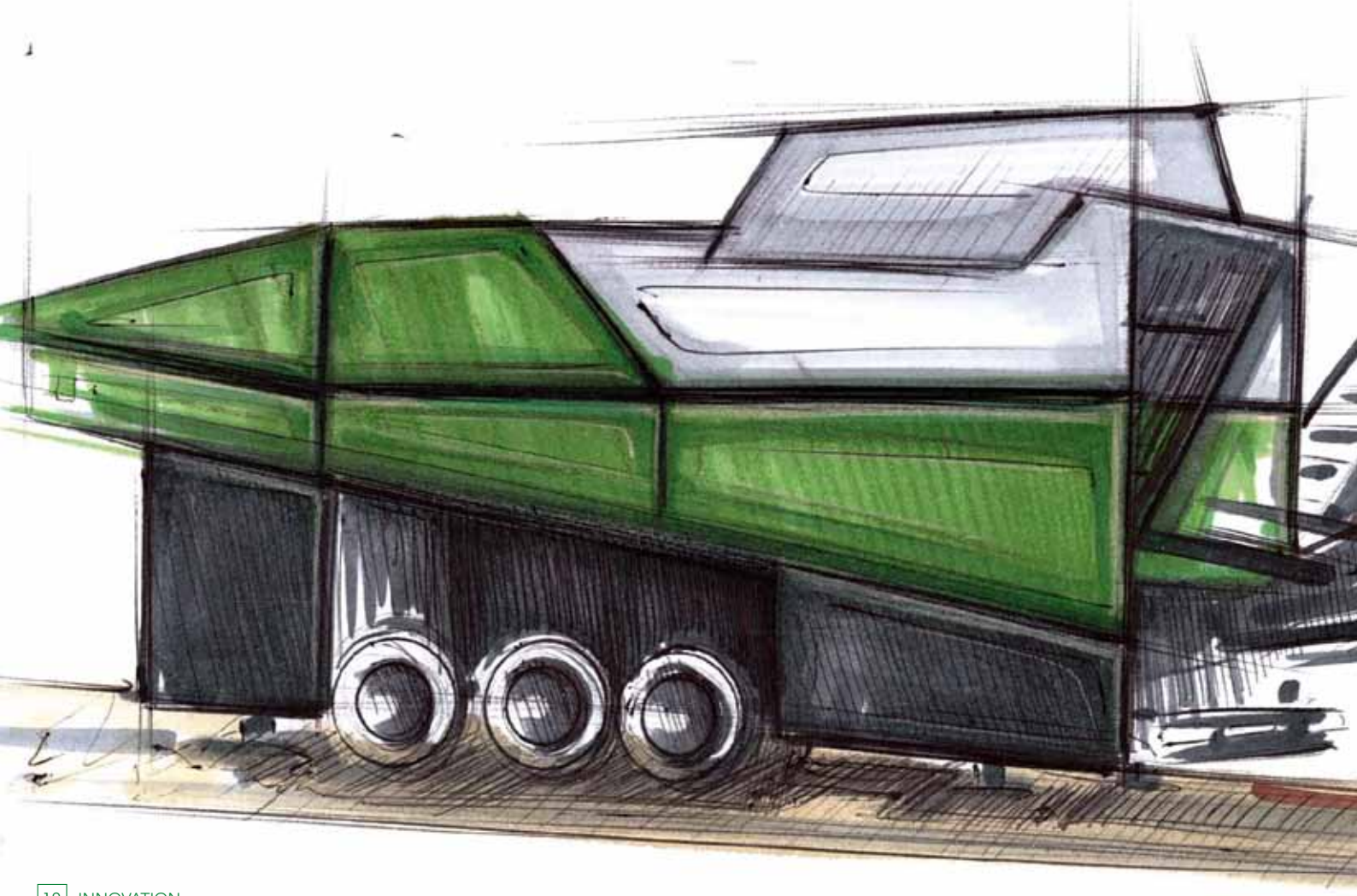
What do you see as the challenges in combining design and technology?

The most important job of the designer is to simplify the high complexity of large machines, while also clearly signalling their function. A designer is a kind of "translator" of the technology. He must make innovation, function, quality and sustainability visible.

What were the challenges in the new Multistar L3 project?

This was my largest project to date in terms of the machine dimensions. With complex machines like this you always have to start by looking at the technology from a very distanced perspective, like a consumer or outsider. You have to ask yourself, "How does this affect me?"

Based on a briefing from Komptech the next job was to determine the positioning of the machine in terms of design, define the product language and simplify the details. On the new Multistar L3 we wanted to get high recognition and make sure that it looked different from competitors. I think we managed quite well.



Were Komptech developers involved in the design work?

Of course. You always create the design for a machine in dialogue with the client. The designer deepens his knowledge through the feedback he gets from the company. The product changes but the core idea remains. Compromises are necessary, but there is a whole range of solutions. In this case it was necessary to give the product some dynamism, a little "speed" so to speak, to communicate the positive properties of innovation, modernity and balance. It's always a matter of making the inner qualities of a product visible on the outside.

What do you especially like about working on Komptech products?

On a machine the size of a single-family house, it's the scale that is the biggest challenge. The larger the product, the more extreme the perspective seems. The product must look confident from every angle and "shine," a bit like a well-designed car. The complex and bulky machine workings must be given dynamism while staying clearly recognizable. Ideally the design should also point to the future.

Johannes Scherr at work.

A first sketch of the new Multistar L3

Johannes Scherr has been responsible for the design of new Komptech machines since 2013.

Where do you see the status of design for industrial products as compared to consumer goods?

Every product must represent the identity of the customer. It's like the company's calling card. The difference between industrial and consumer products is no longer that great. In my opinion design is equally important everywhere. For example, look at Claas (agricultural) machines with their consistent design line. Design that attracts attention in a positive way can influence the decision to buy.
What's more, if a designer is included in a project at an early stage, he or she can help find solutions no one would otherwise have thought of. Thus, design can deliver innovation. The later the design element is brought into a project, the more you end up just working on the packaging.

Komptech's developers were especially impressed by your just-in-time concepts. How has the shift from pencil to Apple in recent years changed the way industrial designers work?

The focus has naturally moved to the digital. With digital design tools you can quickly translate 3D data from development into images. So you can try things out and react quickly. But the hand-drawn sketch is still the most important tool. It's the fastest way to come up with creative ideas and to get a wide range of potential solutions on paper in a short time. First you have to find the direction before you get into the digital phase where you work out the solution details. That means that design remains a mix of analogue and digital tools.

ABOUT JOHANNES SCHERR

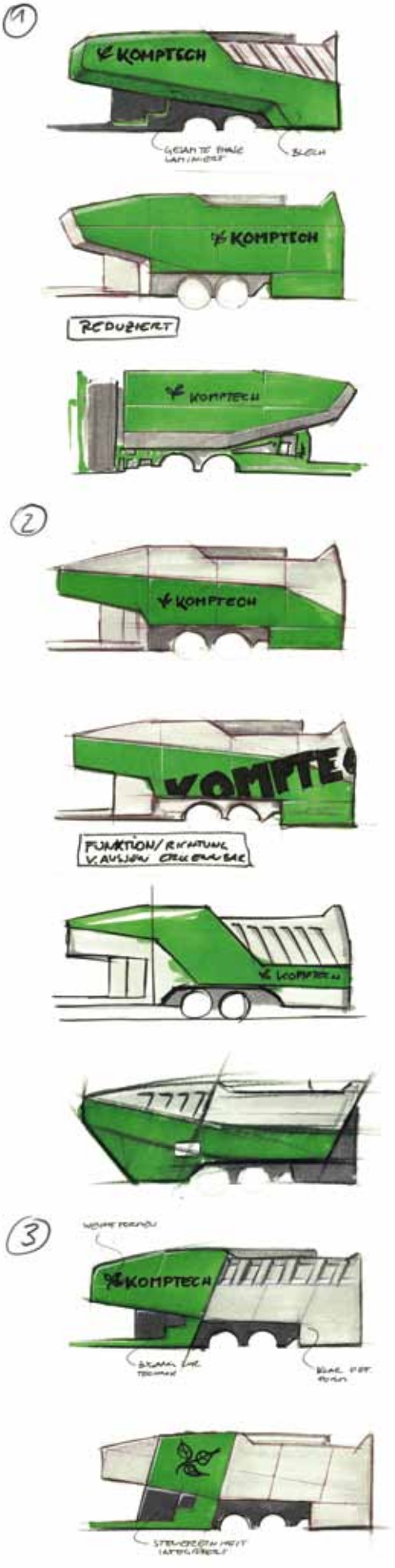
For Johannes Scherr the priority is on finding an umbrella idea that can be felt in the product, and on sustainability and functionality. His Vienna design bureau works for international companies in transportation, furniture, product and packaging design.

A trained industrial designer, he gained product development experience at Philips Design. Numerous major design awards attest to Scherr's professionalism and innovativeness. He also demonstrates it with creative research for new materials and production methods.

After studying industrial design at Graz (Austria) University, starting in 2000 Scherr designed for companies like Philips Design Eindhoven, Almdudler, Rauch Fruchtsäfte, Red Bull and Bene. From 2002 to 2008 he and Stephan Breier operated under the name "Element Design." In the fall of 2008 he founded the Johannes Scherr Design Bureau. From the fall of 2009 to the summer of 2011 Scherr also led the design department of Benelli Watercraft in Pesaro, Italy. In addition, since 2006 he has been a visiting lecturer at Linz Art University and Salzburg Technical University in Kuchl, and since late 2010 at the Industrial Design Technical University in Graz.

In addition to a lifelong passion for science fiction, Scherr is also inspired by nature. Hiking in his native Austria restores his energy for his many projects. Visits to the great cities of Europe give him further ideas for the daily design challenges in his work.
Scherr's life is centred around Vienna.

www.johannes-scherr.com



Hand sketches give many different variants quickly.

MULTISTAR L3

Six reasons you'll love the new Multistar L3

The new Multistar L3 is a further refinement of the Multistar series star screens. The new L3 retains all the proven features of its predecessor and adds many innovations that give it substantially higher flexibility, easier maintenance and longer life.

01 Easy screen deck change

The cassette design makes it easy to pull out the screen decks. This minimizes downtime and simplifies grain size changes.

02 Simpler shunting and combining

The towbar is hinged and is now located on the coarse discharge side. That means easier shunting and alignment with downstream machines

03 Efficient, quiet, easy

The electric drive concept remains unchanged. What's new are lower-emission motors (option) and an operating panel with improved usability in the new Komptech design.

green efficiency®
by KOMPTECH

NEW

06 New fine fraction discharge system

The fine particles are discharged by a one-piece corrugated edge belt. The design prevents material trickle at transfer points, while also giving high capacity and low wear.

05 Perfect maintenance access

The cover panels don't just protect the components inside, they also serve as access doors for full access to all maintenance points. The feed hopper can be lifted up to give unrestricted access to the fine screen deck.

04 Robust screen deck drive

New and repositioned drive motors make screen deck maintenance significantly easier. All drive components have been revisited and are designed for longer life.

OFF TO NEW HORIZONS

The European Union Commission has ambitious waste recycling goals.

In July 2014 the EU Commission accepted suggestions on how Europe can shift to a recycling economy, by promoting recycling in the member nations. The ambitious plans in detail.

If the new plans are implemented, by 2030 Europeans will be recycling 70 percent of their household waste and 80 percent of packaging. Starting in 2025 landfilling of recyclable waste will be prohibited. In addition, targets were set for reducing waste disposed at sea and for reducing food waste volumes. Meeting these new waste reduction targets would create 580,000 new jobs, make Europe more competitive, and reduce the demand for costly and scarce resources. The suggested measures would also mean reduced environmental burden and lower greenhouse gas emissions.

This review pursuant to raising the targets in the existing regulations on waste reduction is part of an ambitious project for a fundamental shift from a linear to a cyclical economy. Instead of extracting resources, using them once and throwing them away, the new concept proposes a cyclical economic model. In a cyclical economy, reuse, repair and recycling are the norm - waste becomes a thing of the past.

The new strategy shows how new growth and employment opportunities result from the more efficient use of resources. It spurs investment and financing, while strengthening the role of business and consumer participation. Furthermore, the Commission suggests that resource productivity be measured on basis of GDP/resource use, and that in the upcoming review of the Europe 2020 strategy an improvement by 30 percent by 2030 be considered as a possible core target.

Source: EU Commission

PERFECT CHIPPING

Still in great shape after almost 11,000 operating hours.
To Matthias Möller, his Chippo is the ideal chipper.

Almost 11,000 operating hours – Matthias Möller is still delighted with his Chippo.

Matthias Möller speaks highly of the perfect quality.

2014 is a triple anniversary year for Matthias Möller and his forestry company in Willingen, Germany. First came his 30th birthday. Then the 10th anniversary of his company's founding. And then his Chippo 5010 C passed the 10,000 operating hour mark. For Möller that's not a problem at all; on the contrary, it shows just how tough this mobile drum chipper is. Built by Komptech, it's designed for long service. "It does over 2500 operating hours per year, not every chipper can handle that, and the work is anything but easy," says Möller. He is thoroughly familiar with the stresses and strains a chipper is subjected to in operation.
He took his Chippo drum chipper into service in March 2010. Mounted on a three-axle MAN truck, it's powered by a 480 hp truck engine using a special transmission designed specifically to cope with logs up to 75 cm thick. And it can do better than that - to reduce larger trunks, this Chippo also has a log splitter that folds out from the truck. In addition to the standard fan and discharge pipe, a discharge conveyor can also be used to remove the chips, opening up a whole new range of possible applications.

It's all controlled from the passenger seat in the truck cabin, which is certainly more comfortable than a separate crane cab.

"SWEETIE" IN CONTINUOUS USE

Thomas Fischer, a long-time employee of Matthias Möller, is normally the only one at the company who gets to run the Chippo. He calls it "Schätzchen" (sweetie). If Fischer is away, Möller is the only substitute operator. "This arrangement has worked out very well. Thomas is very careful with 'his' machine, and keeps up with the maintenance intervals. He also operates the chipper in a very material-saving way," adds Möller with a laugh.

This 5010 C was the first mobile Chippo Komptech brought on the market in this configuration. There have been no major breakdowns so far. "If something gets stuck, Komptech took care of it without us needing to be after them or complain about anything," says Möller approvingly of the way Komptech's technicians always respond quickly in case of problems.

The Chippo at work - transport logistics and work processes mesh perfectly here.

In this business, wear and tear is naturally a key issue - "but wear is entirely natural and depends a lot on the material we put through the machine."
We took a look for ourselves at a worksite near Bad Camberg. Möller's Chippo is chipping poplar trunks, forestry residue and crown wood. The wood is in a big stack by the side of a field road. The goal is to process it into biomass as quickly as possible, without further separation. This is an ideal job for the Chippo, and it blows the chips directly into a 40 m³ container.
Getting everything to run smoothly takes the right transportation logistics, plus Thomas Fischer's skill at evaluating the different wood qualities and controlling the material feed so that there are no stoppages. Logs that are too thick are split and set aside to wait for the right moment for feeding into the chipping drum. He is particularly careful with the waste wood in the stack, but cannot prevent some stones and other contraries from getting into the chipping drum. "Contraries" like stones or even large pieces of metal is a word that no operator likes to hear. Contraries can cause massive damage to the teeth, or even make the machine unusable. For Komptech this was unacceptable. The company did something about it, and presented a new contrary-resistance concept for the Chippo at the Interforst trade fair in Munich. When a tooth encounters a contrary it can't deal with, a shear bolt and swing-away tooth mounting protect the machine.

Discharge is by fan or a separate discharge conveyor.

Möller looked at the design and was convinced, and since then it has proven itself in practice many times over.

ECONOMY, HIGH PERFORMANCE, TOP CHIP QUALITY

As far as Matthias Möller is concerned, the Chippo 5010 C is still the ideal machine for his needs and those of his no less demanding customers. "The three axle chassis makes the Chippo very manoeuvrable, so it's easy to use on narrow forest roads. That means tight spaces present no problem, but we're still very flexible and can be on-site quickly. It's very economical to run. We've measured the consumption at an average of 35 litres of diesel per hour, which is more than outstanding given the sometimes very demanding working conditions.

Throughput is also good - up to 220 cubic metres per hour is always possible. And finally, most importantly for me the quality of the chips is second to none. Even with sub-optimal input material, there is still a very low fines component. That's what makes this different from other chippers."
The open drum design, well-placed counter-cutter, adjustable blade advance and different screen baskets make the Chippo the only chipper that can deliver such an even chip shape with minimal fines.
"It's this quality that sets the Chippo apart," says Möller. He might soon be looking for a successor to his trusty chipper - and why not a new Komptech Chippo, that could work another 10,000 operating hours problem-free? ■

Forester Matthias Möller founded his company in 2004. Today it has 12 professional employees.

The scope of services includes

- Highly mechanized wood harvesting and moving to roads for for further transportation
- Manual felling
- Log moving
- Conservation
- Chip production and marketing
- Special felling of all kinds

The company works throughout Germany.

www.moeller-forst.de

LESS NOISE, MORE SOUND

Page-one story

With the new green efficiency® machine line, Komptech has committed itself to "Less fuel, more power." The issue of noise emissions is also ever more important.

More and more frequently waste treatment takes place near or even in residential areas, making noise a very important issue. In fact, in such cases, noise is often a deciding factor in customer purchase decisions.

SOUND, NOT NOISE

Accordingly, in the green efficiency® project Komptech has a strong focus on the sound design of its machines. For example, in the development of the new engine compartment for the Crambo many noise-reduction measures have been tested and implemented. The position of the engine in the engine compartment is an important factor. Many other noise protection measures play a role, such as the cladding, the design of the air intake, and the overall radiator design. It's a complex subject, and to deal with it Komptech worked with experts in the different areas that play into it. This ensured the best noise reduction solution in each area.

To stay a pioneer in noise reduction in the future, to give it the attention it deserves and most of all to build up in-house knowledge Komptech has acquired the test and measurement equipment necessary to do the next optimization rounds in-house quickly and efficiently.

INITIAL SUCCESSES

Naturally, now comes the question of what these improvements have accomplished. At the "VDMA Practice Days" at IFAT 2014 in Munich the new Crambo 5200 with mechanical direct drive was demonstrated. It stood between two competitor machines. As the Crambo demonstration was just about to begin an Australian customer asked if the operator shouldn't go ahead and start the machine, since it was the Crambo's turn. But the machine was already running at full power, and was merely waiting for material...

Expressed in numbers, the optimization effort reduced the noise output level by four decibels, which doesn't sound like much at first. But a ten decibel reduction means taking away half of the sound perceived by the human ear. Actually, the optimization reduced the noise level to six decibels under competing machines.

That means that in the future the green efficiency® machines from Komptech will not just give "Less fuel, more power," but also do it with "Less noise, more sound."

green efficiency®
by KOMPTECH

Careful noise measurements clearly show that Komptech machines are substantially quieter than the competition.

System technology

ALWAYS ON THE JOB

Wilbert Smeets turns over a half million tonnes of biogenic waste into compost and biogas each year. As technical director of Italy's largest composting plants, he has long days - but the new Crambo direct works round the clock.

With 280,000 tonnes of green cuttings and organic waste each year, BIOMAN Spa. near Maniago in Italy's Pordenone region has been in a league of its own since starting operations in 2011. At this modern waste treatment plant, composting and anaerobic digestion complement each other perfectly. Wet organic waste supplies biogas for green power, while dry green waste supplies compost for consumers and farmers.

BORN SYSTEM ENGINEER

Wilbert Smeets developed and set up the process. Building systems is something you might say he was born to. Growing up in Holland in a mushroom-growing family, Smeets saw how biology and technology interact early on. Smeets learned to think big, first in his parent's business, and then after getting his engineering degree and running Holland's largest mushroom grower. "In a modern mushroom farm the mushrooms grow on a compost substrate in tunnels under precisely controlled temperature, air and humidity conditions," he explains. "If you're familiar with this, you can also design a compost system, regardless of size."

Mushroom beds were followed by compost system projects around the world that Smeets planned and commissioned for a Dutch company. Wilbert Smeets finally "got stuck" in Italy with S.E.S.A. Spa., which runs one of the country's largest and most innovative waste treatment facilities in Este near Padua.

As technical director his responsibilities are clear: "All the machines need to work, and we need to make money." That goes for S.E.S.A. and naturally for its sister facility BIOMAN Spa., which Smeets planned from the first pipe to the last valve, so to speak.

RELIABILITY A MUST

Smeets has depended on Komptech machines for years. Reliability is very important for him. The stationary shredders can cope with the demanding climate conditions in closed plants, and stand up to round-the-clock shifts. "The Terminator and Crambo are the best machines for these applications. We've tried a lot, and there's nothing better," says Smeets with conviction.

A PROCESS OF SYNERGIES

Both S.E.S.A and BIOMAN use a combined process designed in-house that ensures the most suitable treatment method for all biogenic waste. Contaminated wet organic waste is first shredded, then the contraries are separated out and the liquid pressed out in a special process. The liquid goes to the anaerobic digestion system to make biogas, which gas-powered generators turn into renewable energy. The power is fed into the grid while the heat goes to a district heating network. The solids remaining after pressing are composted.

Green cuttings are first shredded, pre-cleaned and then composted. Biological decomposition and alteration take place in ventilated rotting tunnels. Excess fluid from anaerobic digestion is used to moisten the compost. The process is complete after 8-10 weeks, whereupon the compost is again screened and cleaned. After being allowed to cure a little longer it is used as a component of a compost soil that meets the highest quality criteria and is sold under its own brand.

www.sesaeste.it
www.bioman-spa.eu

BIOMAN / S.E.S.A.

"AS FAR AS WE'RE CONCERNED NOTHING'S BETTER THAN THE CRAMBO AND TERMINATOR."
Wilbert Smeets, technical manager at BIOMAN Spa.

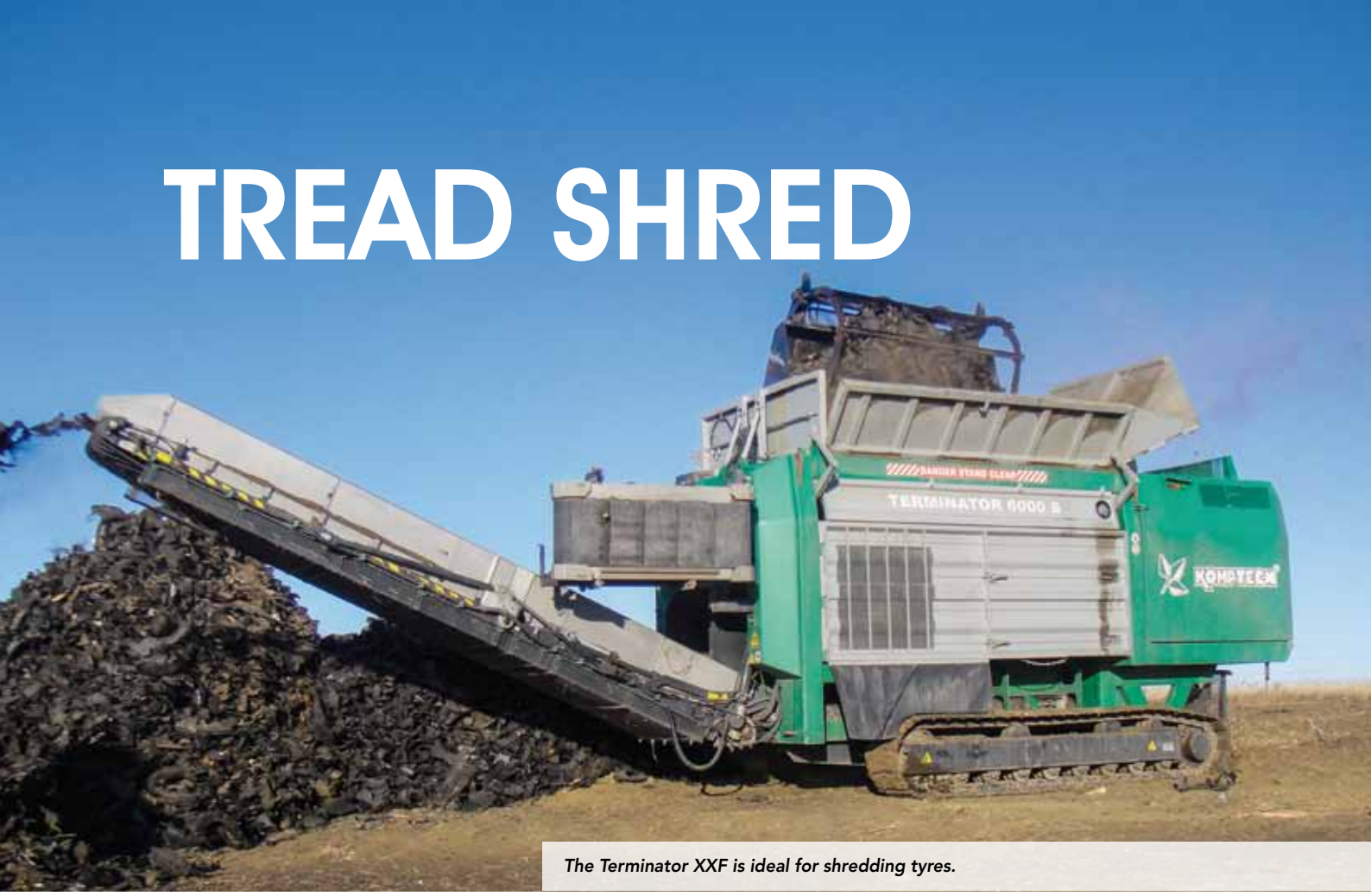
CGT, Komptech's Italian distributor, makes sure that maintenance and service go fast and planned downtime is kept minimal. As the general importer for Caterpillar CGT also keeps an eye on the many loaders used at the facilities.

AN INVESTMENT THAT PAID OFF

Although electricity is generated at the plants, the operator still wants to keep its energy use to a minimum. Because of this, green waste for composting is shredded with a Crambo direct that uses mechanical gearing instead of hydraulic drum drive. "Although our hydraulic Crambos are still in great shape after thousands of hours, we still decided to replace them with much lower-consumption direct-drive machines. The shredders are in use day and night, so saving 30 percent of the energy pays off very quickly," says Smeets of the decision.

In addition to the big plants, he is also responsible for several agricultural biogas plants, so he has no shortage of things to fill his days. One of his three phones is always ringing. Smeets remembers one call right after the start of operations: "Boss, we have a problem. The machine's throughput is too high!" That's the risk when you run a green efficiency® machine whose motto is "Less fuel, more power." But Wilbert Smeets and his team have learned to deal with this situation well. ■

TREAD SHRED



The Terminator XXF is ideal for shredding tyres.

Rather than pay someone to haul away waste tires, landfill manager Rhett Albers in South Dakota discovered an alternative handling method that has revolutionized his business.

In practice
Standing Rock Sanitation Service

Mattresses. Furniture. Railroad ties. The variety of items Standing Rock Sanitation Service can run through its Terminator 6000S shredders is seemingly endless, according to Rhett Albers, project engineer and manager. But one especially difficult material positioned the company to reach new heights. "For the longest time we were trying to figure out how to deal with waste tires," says Albers. "We didn't have room in our landfill for them, so we had to ship them out. That was expensive because of our remote location." Albers estimates Standing Rock was paying about 200 euros per ton for tires to be hauled away from his facility. So he looked around another way to deal with the problem, and found one – the Terminator. "About a year and a half ago Rhett asked how our machines would work shredding tires", says Brad Kiecker, sales manager at Midwest Recon, a Komptech dealer that covers South Dakota and four other states. "I said, we have a machine called a Terminator that will shred practically anything."

A NEW OPPORTUNITY

The capabilities of Komptech's Terminator 6000S gave Albers other ideas. He knew that other landfills like his in North and South Dakota likely faced some of the same tire handling challenges as his facility.

"We thought if we can stockpile our tires, other facilities could stockpile theirs and we could establish a route to process them," Albers says. Now, Standing Rock shreds tires for facilities across five states.

3.7 million clicks on the tyre shredding video, and rising. http://www.youtube.com/watch?v=WgrEG0Yp6ws)

According to Kiecker, Standing Rock shreds tires down to about a 6 or 8-inch product. In an hour, he estimates the company can grind 1500 car tires.
"It's been a lot higher volume than we first thought we could get through the machine," Albers says. "Customers are amazed. With mixed car and truck tires, and even tractor tires, we're averaging up to 12 tons per hour. Which is good, because some customers have 300 to 500 tons for us to shred."
Shredding tires doesn't just save haulage costs and landfill capacity – it opens up other possibilities as well. "Landfilling whole tires is a worst-case scenario," Albers says. "You cannot get the air or gas pockets out of them, so the tires just keep moving up the landfill." Instead of landfilling them, Albers says landfill operators can use tire shreds as base material for their facility, as an alternative daily cover to control erosion or as a base for pipe bedding.

A NEW MACHINE – THE TERMINATOR XXF

Word of the company's tire-shredding abilities got around, and in the winter of 2014 a waste energy plant almost 2000 miles away in Florida contacted Standing Rock, asking it to put together a test program to shred tires, railroad ties and miscellaneous wood waste for RDF. Standing Rock reacted fast and started the job in February, investing in a second Terminator 6000S to handle the workload.
The original plan was to spend three or four weeks in Florida, but Standing Rock is still there. "This has gone so well that we're negotiating a long-term contract now," Albers says. Standing Rock has been a pioneer in this application, and made numerous adjustments with the teeth and setup of the machine to get higher volume and better shredding with tires. Komptech responded by developing an XXF model that is specially optimized for shredding tires. Standing Rock's third Terminator purchase was an XXF model, and the company is retrofitting its other two to XXF configuration.
The interest is definitely there – according to Albers, "in Florida people are always coming in to see what we're doing." Komptech likewise sees growing market potential, and is ready to serve that market with the Terminator XXF. ■

Tyre recycling is a big issue in the US.

Terminator: XXF shredding unit

EVEN FINER - EVEN BETTER

Shredding is the first step in processing almost every kind of waste, whether intended for recycling or fuel. The purpose is to get a defined, homogeneous material flow without overlengths for the downstream screening and separation steps. There is also more and more often the challenge of getting an incinerator-ready grain in just one shredding pass. The new XXF shredding unit of the Terminator was designed to address exactly these goals.
It features the proven blade mounting of the F (fine) system and a new tooth arrangement that puts the full shredding force on just one tooth at any given time. The precision cut is aided by a newly developed counter comb with a shredding gap of just 2 mm for a very fine grain, for example when shredding tyres.

ADVANTAGES

» Consistent particle size with high degree of shredding
» High shredding force even with difficult materials
» Easier drum tooth changes
» Lower wear part costs
» New applications

Phillip Corkhill appreciates his Nemus.

MORE GREEN ON THE RED CONTINENT

In Australia, three generations of Corkhills make a valuable contribution to the preservation of agricultural lands. As true composting pioneers, the Corkhill Bros company has long relied on green machines from Komptech.

Agriculture is an important part of the Australian economy.
But due to the country's climate and soils, only a relatively small area is suitable for growing food crops and animal feed. Furthermore, artificial irrigation and chemical fertilizers increase the risk of soil exhaustion and salinization, ultimately leading to a loss in already scarce cultivable land. One effective way to counter this is by returning organic matter to fields in the form of compost – indeed, only with the targeted restoration of organic matter in soil is sustainable agriculture possible in the long term. That is exactly what the Corkhill Bros company has been doing for three generations.

A MILLION CUBIC METRES

In the early 50s, Brian and Patrick Corkhill founded a small landscaping and earth-moving company near Canberra. The company processed and sold earth, sand and gravel. In the late 80s the company also started recycling green waste. Today, that has become by far the company's most important business. With over a million cubic metres of market-ready product, Corkhill Bros is the industry leader in southern Australia.
Phillip Corkhill and his brothers direct the many and varied activities involved in making a range of products for farmers and gardeners.

Their father Brian still helps out, and the next generation is ready come on board in the form of Phillip's son Jacob.

"THE NEMUS HAD ME CONVINCED"

Phillip Corkhill

A CHANGE OF HEART IN AGRICULTURE

As popular as his products are with homeowners and landscapers, Phillip Corkhill sees even more potential in agriculture. "Many farmers know that they need to move towards organic agriculture. But there is a long way to go before that happens." The fact that this change of attitude is taking place at all is down to Phillip himself, at least in part. On his own fields he demonstrates the effects of composting. "Especially in tough conditions like dry seasons, plants in composted fields are much hardier than plants in fields fertilized conventionally with chemicals."

GREEN MACHINES ON THE JOB

Incoming material first goes through a gigantic high-speed shredder. Thereafter it remains under the care of Komptech machines. Composting takes place in windrows. A Topturn X53 provides regular turning and especially watering. "In this climate, controlling the temperature and water content is a daily task - without continuous watering the windrows would dry out," says Phillip of Australian conditions. Depending on the job, screening is done with an L3 star screen or Komptech drum screen. The drum screen is also used to mix in the various additives.

MORE THROUGHPUT WITH THE NEMUS

Since the end of last year a new drum screen has reinforced the Corkhill Bros machine park. Phillip Corkhill had a special task in mind for it: "To increase the water retention capability of our substrate we mix in special hydro gels. As a consequence the material we screen is quite damp and sticky. On our Mustang that material sticking to the side wall behind the drum would sometimes clog the holes.
The Nemus has much greater spacing. Even if material sticks to the side wall, the drum holes remain unclogged and I get at least 25 percent higher throughput."

SMALL CAUSE - BIG EFFECT

Making the spacing a little wider wouldn't seem to be that big of a deal. But for the Nemus we wanted the maximum drum diameter, while not exceeding the maximum width the machine can have and still be street-legal. So it was something of a challenge. But the reward is a special benefit that for some customers can tip the scales towards a purchase.

Phillip is very happy with the performance of his European machines, and also feels like he is in good hands when it comes to maintenance and spares. Komptech's former distributor in Australia laid the foundation for a close relationship, which transitioned smoothly to the new distributor Ditch Witch Australia with its Komptech specialists. The important thing for Phillip is that the manufacturer be willing to come to the other side of the world, get to know the local challenges and then react appropriately. "Obviously I'm going to buy the machine that brings me the most benefit, and recently that has almost always meant a Komptech machine."

www.corkhillbros.com.au

CORKHILL BROS

The machine park consists almost entirely of dark green Komptech machines.

A BRITISH SOLUTION FOR THE LONG TERM

The Derbyshire County Council and the sustainability specialists from SITA UK approached Komptech's UK partner Finning with a very unusual request. They wanted Finning to supply the entire waste treatment system for a facility in Arkwright, North Derbyshire.

Determined to find an answer to all the open questions, for the first time Finning combined its available Komptech and Caterpillar® resources in a single project. Planned in months of careful detail work by the Council, SITA UK and Finning, the result was a green waste treatment facility that was state of the art upon commissioning in May 2014.

LANDFILLING NO LONGER AFFORDABLE

Why were these investments necessary in the first place? Joan Dixon of the Derbyshire City Council (DCC), responsible for employment, business and transportation, explains that "landfilling is getting more and more expensive. The Council had to cut its budgets by 200 million euros, and landfill tax is currently about 100 euros per tonne. We just can't afford it anymore." With this in mind, the Council set ambitious goals: composting 40,000 tonnes of green waste in the first year, to save over four million euros. This makes the Arkwright facility a milestone in British waste treatment.

Finning's mobile machines are at the heart of it, because they can best manage the high material volumes and can be looked after by experienced technicians throughout their service life. Julian Lamb, strategic consultant at Finning Komptech, and Dean Turner, customer rep at Finning Caterpillar, took on the difficult task and defined the requirements for machine capabilities on the Komptech and Caterpillar sides.

THE PERFECT TEAM

"The machines that work together at the start of the composting process where green waste is shredded are a good example. A Cat 938K frontloader is ideal for loading the Komptech Crambo 5200, since its high-tipping bucket easily gets all the material into the shredding chamber," explains Lamb.

One major goal was to reduce the emissions from the machines. Lamb explains how they did it. "We used

System technology

40,000 tonnes of green waste were processed at the Arkwright facility in the first year alone.

Caterpillar engines in both the Caterpillar and Komptech machines." All of the mobile machines at the facility have 35 percent lower emissions than their predecessors and meet the EU IIIA emission standards. The Crambo 5200 shreds 80 to 90 tonnes of waste per hour, using only about 45 litres of fuel to do it. Its new direct drive makes it a green efficiency® machine.

SERVICE MAKES THE DIFFERENCE

Finning's network of locations throughout Great Britain played a major part in the project. "A team of well-trained Finning technicians just down the road in Chesterfield gives us fast access to the facility in case of emergency. That's especially important in summer, when the Arkwright facility is working at capacity.

If a problem comes up with one of the machines we're there right away to solve it and keep downtime to a minimum," continued Lamb.

He concludes, "the facility is a long-term investment. There is a 20-year contract in place between SITA UK and the Derbyshire County Council. As the solution provider, we'll be providing service for many years."

www.finning.co.uk

As strategic customer rep for Finning-Komptech, Julian Lamb was responsible for the project.

OPERATION SUCCESSFUL!

Steffen Henze (center) and Dieter Kirsten (left) talking with Komptech fitter Thomas Weging

A new machine purchase is not always the most cost-effective solution. With stationary machines especially, refurbishment and modernization can be viable alternatives. Steffen Henze, operations director of the Cröbern waste treatment plant, ran the numbers and decided to have his Terminators "operated" on.

The mechanical-biological waste treatment plant of the WEV (West Saxon Disposal and Recycling) company in Cröbern near Leipzig (Germany) started operations in 2005, and right from the beginning its two Terminators have stayed busy shredding household waste for further processing. In fact, during the first years they were in operation almost around the clock, and still put in eight to ten-hour days dependably and stoppage-free.

"After more than eight years, 20,000 operating hours and thousands of tonnes of shred, naturally you have to expect some wear and tear to show," reports Steffen Henze, "especially since a replacement shredding line purchase was originally planned for four or five years down the road."

But increasingly tight economic constraints forced a change in plan. Today the facility must carefully calculate and assess when repairing and upgrading a machine is more advantageous than investing in a new one.

TERMINATOR ON THE OPERATING TABLE

Great satisfaction with their functioning and the good overall condition of the machines were the major factors that motivated Henze to have his Terminators overhauled. "When one of the machines was on the operating table, as it were, the other had to do double the work," reports Henze. "So we tried to keep the down times as short as possible." It was made possible by precise coordination of the "operating team."

For Dieter Kirsten, who is responsible for maintenance of the plant as a whole, this was the deciding factor: "The collaboration between Komptech, the outside maintenance company and our own people worked great. Working together, we switched out the drums, dismantled and reinstalled the hydraulic drives and even put a new back wall in the shredding chamber."

Both machines got new F (fine) shredding drums.

MBA WEV Cröbern

Mechanical-biological treatment facility for household, bulky and commercial waste

Treatment capacity:
approx. 300,000 tonnes per year

Preshredding by two
Terminator 5000

www.wev-sachsen.de

Thomas Weging, lead fitter with Komptech, recalls a dicey phase of the operation: "Due to the frequent and extensive addition of armouring to the drum body around the tooth mountings, the drive inside the drum had become firmly stuck to the inside drum walls. We had to cut the drive free with a torch, taking great care to get it out without damage."

EXCEEDING EXPECTATIONS

The results were worth it. Fitted out with new F (fine) shredding drums, the two Terminators now work even more efficiently. Because a higher degree of shredding plus higher throughput add up to higher efficiency for the plant as a whole - which makes Steffen Henze happy. And Dieter Kirsten is happy about the new mounting system for the teeth, because it makes tooth changes much easier.

KOMPTECH tweet

The Komptech service team visiting Claas.

BEST IN CLAAS

To offer "best in class" service, you need to measure up to the best in the world. A visit to Claas, the world's leading agricultural machine manufacturer, provided some very good insights towards meeting this goal. In ag tech, if there is a breakdown during harvest the manufacturer needs to do whatever it takes to get the machine back into operation promptly.

In its home market of Germany alone, more Claas machines are in operation than Komptech machines worldwide. But one thing is very similar - customer needs. In many cases Claas customers can pick up spare parts at night.
The logistics are optimized for it, with all components in stock, packaged and ready to go. That slashes the time from order to delivery. Komptech is also going to great lengths to improve its ongoing logistics processes. For example, Claas recommended prepackaging parts even more.
And we've already responded - we now have automatic stock monitoring, and with the implementation of SAP all warehouses were linked together. Further measures will follow - and naturally we'll report on it.

Komptech – a new member of the Styrian Service Cluster

STYRIAN SERVICE CLUSTER

To learn more about service and after sales business, it is very important to get together with peers and discuss experience, trends and potential developments. For this reason Komptech has joined the Styrian Service Cluster. Other members include familiar names like Knapp, Andritz, AVL, Sandvik and many more. The goal of the cluster is to provide a forum for continuous discussion among professionals, to create new approaches for innovative services.

www.styrianservicecluster.com

KOMPTECH PRACTICE DAYS

It's important for Komptech designers to get a feel for what actually happens to the machines out in the field. The Komptech Practice Days give them an opportunity to do so. From September to November 2014, six design employees were sent to Komptech users in Romania, Switzerland, Germany and Austria for three to four days. The employees were tasked with thoroughly documenting their visits and delivering at least three suggestions for product improvement based on what they saw. It was a successful project that will doubtless be repeated.

Komptech developers visiting customers.

JOSEF HEISSENBERGER SCHOLARSHIP

Starting in the 2015/16 academic year a Josef Heissenberger Scholarship at the University of Leoben, Austria will be awarded to each year's top students of industrial environmental protection and recycling technology.
The scholarship will be awarded by a jury composed of company representatives and members of Josef Heissenberger's family.

www.unileoben.ac.at

New at the University of Leoben starting in 2015 - the Josef Heissenberger Scholarship

GREEN EFFICIENCY®

Komptech green efficiency® products are distinguished by outstanding energy efficiency and minimal noise and exhaust emissions. Generator motors complying with the latest exhaust scrubbing regulations are available for the L3 and all other Komptech mobile star screens. Accordingly, all will now bear the green efficiency® logo.

www.greenefficiency.com

All Multistar star screens are now green efficiency®.

Two in one: the Hurrifex

Stone and light material separator

green efficiency

NEW

Perfect maintenance access thanks to large maintenance doors and air intakes that fold open

Low energy costs thanks to electrical drive of all components

Wide range of applications thanks to easily adjustable separation parameters

Reliable separation of stones and light material with a separation rate of up to 95 percent

Throughput up to 60 m³/h with input sizes from 10 - 150 mm

Flexible energy supply, from grid power or with the optional on-board diesel generator

Can be combined with almost any screening machine

KOMPTECH
TECHNOLOGY FOR A BETTER ENVIRONMENT