

The REMONDIS Group magazine

REMONDIS AKTUELL

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REMONDIS' energy transition

E-recycling with a new energy
management system



Guest article

Franz Untersteller MdL, Minister of the Environment, Climate Protection and the Energy Sector for Baden-Württemberg, on the planned recycling law

"Working together to grow sustainability"

The results of REMONDIS' third major customer survey

Mercury – back to nature

NQR's patented mercury recycling process

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Ludger Rethmann, REMONDIS Board Member

Dear Readers!

Whilst the energy transition “experiment” continues unabated in Germany and the large energy providers find themselves in a difficult situation as they try to find out exactly what their main business now is, REMONDIS – as a consumer – has been taking action and has come up with some innovative solutions to tackle the energy problem. We have, for example, succeeded in considerably reducing energy consumption at our dismantling centre for waste electrical and electronic equipment at the Lippe Plant in Lünen by introducing a new energy management system. Whereas, in the past, it had only been possible to see how much energy the plant was consuming as a whole, a new software system – developed by the company itself – now enables the consumption of each individual piece of equipment and each individual light to be recorded. One of the responses to the results generated by this new system was to exchange all the lights in the plant with state-of-the-art LEDs. This has led to more light with fewer carbon emissions and lower costs and this idea is catching on across the whole of the group. This is what we at REMONDIS believe the energy transition to be.

REMONDIS continues to enjoy healthy growth and not only in its home region of North Rhine-Westphalia. Our family-owned company has been expanding in the countries which are on its list of “core regions”. These include, for example, neighbouring countries such as Poland to the east and the Netherlands to the west. The Dutch recycling firm, van Gansewinkel, recently sold its Polish operations to REMONDIS. Furthermore, REMONDIS acquired the business locations and activities of the Becker Group in the south of Poland. Thanks to these latest transactions, we have succeeded in expanding our range of services for our Polish customers and strengthening our position on the Polish market – one of the company’s so-called core markets. At the

time of going to press, we also received the good news that our Dutch subsidiary has taken over the Dusseldorp Group. This will considerably grow REMONDIS Nederland’s operations in the Dutch recycling sector.

According to the Federal Office for National Statistics, the total debt of the local and district authorities in Germany lay at around 140 billion euros at the end of 2014 – and this figure is likely to rise. Some councils, however, are of the opinion that they can solve this problem by remunicipalising services that, they believe, fall into the category of “vital public services”. To be able to do this though they must spend large sums of money on setting up the necessary infrastructure – an infrastructure that private sector firms already have in place and which they could offer far more cost-effectively. We know from experience that the best solution is to work together as partners, as can be seen in the City of Freiburg in the Breisgau region. The PPP model continues to be a practicable solution that unites the two worlds in the best possible way and brings the most benefits for the regional economy and the local inhabitants.

The arrival of hundreds of thousands of refugees in Germany to escape from their war-torn homelands will mean greater challenges as well as some great opportunities for our country and local authorities. Let us work together in a spirit of optimism and confidence to create a better future for everyone living in our country. REMONDIS is there as always to help and advise its municipal partners.

Yours

Ludger Rethmann

REMONDIS' energy transition



REMONDIS ELECTRORECYCLING INTRODUCES A NEW ENERGY MANAGEMENT SYSTEM INTO ITS BUSINESS

“More light!” were the last two words uttered by Johann Wolfgang von Goethe, spoken at a time when candles and oil lamps were the only source of artificial light. 47 years later, his final wish was fulfilled – right across the world – by Thomas Alpha Edison when he patented the light bulb, originally invented by the German emigrant Heinrich Goebel. The world became a brighter place. Not a great deal happened in the lighting industry over the next one hundred years or so with energy being so cheap and becoming ever easier to access. No-one had the slightest inkling of the problems of carbon emissions and climate change. The energy transition did not get underway until 2006 when the first LEDs broke the 100 lumens-per-Watt barrier and the efficiency of conventional light bulbs was called into question as scientists investigated the causes of climate change. REMONDIS has now successfully implemented its own energy transition.

The questions facing businesses in today's more or less well-lit working environment is not how to get 'more' light but 'better' light and how to implement the best possible energy management systems. The advantages speak for themselves. On the one hand, better lighting reduces energy consumption and significantly lowers overheads. On the other hand, carbon emissions are cut as energy consumption drops. Back in 2011, REMONDIS Electrorecycling GmbH set itself the goal of introducing the DIN EN 50001 energy management system into its WEEE dismantling centres. With Gudrun Timmer and Carsten Koch appointed energy management officer and energy management specialist, the company began the official process of introducing the system into its operations in 2013. Certificates were issued for 2013 and 2014 confirming that the DIN

standards had been established in their company. The DIN ISO 50001 certificate was then issued by ifu-cert to all of the company's dismantling centres in Germany this summer, complementing the certificates that REMONDIS Electrorecycling already has for its quality and environmental management systems (DIN EN 9001 & 14001). The company's goal now is to have had all of its European dismantling centres in Poland and France certified by the end of the year.

Gudrun Timmer (responsible for all organisational and documentary work needed to meet the DIN standards) and Carsten Koch (in charge of implementing the technical measures into the plants and evaluating the recorded data) have driven forward this energy transition project at REMONDIS with passion and enthusiasm. “This accreditation underlines the company's determination to improve energy consumption at its plants. It's not enough to simply say 'the environment is important, we must save energy'; this commitment is far more credible when a business actually introduces an environmental or energy management system,” explained Gudrun Timmer. “Improving energy consumption and cutting carbon emissions are just a few of the key words that can be heard during this process. Thanks to the German SpaEfV ordinance – which was introduced to promote energy efficiency – a company's tax bill can also be cut considerably if they provide proof that they have introduced a new energy management system.”

Carsten Koch



Gudrun Timmer



Carsten Koch described how the system actually works: "In 2012, our dismantling centre in Lünen only had two electricity meters on two transformers. A measuring system has now been installed across the plant with 20 individual electricity meters as well as units to measure compressed air and gas consumption. This has made everything far more transparent allowing us to see how energy is consumed throughout the whole of the facility. We now have access to far more detailed information and can see exactly how much energy each individual piece of equipment uses." All the measurements are displayed via a monitoring programme, which is based on the ideas and concepts drawn up by Carsten Koch and was programmed by the company Lanfer in accordance with his instructions. This innovative software was installed in the dismantling centre in 2014 and since then he has been able to call up and evaluate the consumption of electricity, gas and compressed air at the Lünen plant in real time from his office.

This monitoring programme is certainly very versatile: current and past measurements and evaluations can be called up to compare energy consumption and the availability and running times of the different types of machinery. Besides monitoring energy levels, the programme is also able to record, process and evaluate a whole range of measurements. As the system is web-based, it can be accessed from anywhere in the world and at any time – even by smartphone! Furthermore, the plant manager is sent an automatically generated report every day that gives the plant's energy consumption levels of the previous 24 hours. This information enables any irregularities to be picked up quickly and can also be used for planning maintenance work.

Even the experts were surprised by the initial evaluations of the energy consumption at the dismantling plant in Lünen in 2014. Gudrun Timmer commented: "We were very surprised to see that 36.3% of our overall energy consumption in 2014 was caused by our lighting system." This was certainly an issue that could be resolved by investing in new

lighting technology. A detailed analysis was carried out and a concept drawn up to improve the situation. An innovative LED system was then installed in the plant during the first quarter of 2015: around 140 480-Watt lights were replaced by 100-Watt LED lights. Moreover, as the new lights were so much brighter, fewer were needed and a number of the old strip light systems could be removed. "Simply installing modern lighting will cut consumption by 83.5%. The investment will have paid for itself within just 14 months," Carsten Koch concluded.

The new LED lights will cut the company's electricity consumption by around 380,000 kwh/year and reduce its overheads by €60,000 per year. Carbon emissions will be slashed by an incredible 230 tonnes during the same period. And Goethe's final wish will also have been fulfilled. The lighting in the plant is much improved and the employees really like the new system as it is very similar to natural daylight.

WEEE recycling is much better for the environment than mining primary raw materials – the new energy management system will help to cut carbon emissions even further

The consumption of each individual machine can be monitored and improved thanks to the new system

A genuine win-win situation:
costs cut by

€ 60,000

a year and carbon emissions by

280 tonnes



Industry joins forces to prevent climate change

NEW INITIATIVE TO FIGHT CLIMATE CHANGE

The state government of North Rhine-Westphalia (NRW) is calling on politicians, businesses and the public to join forces and support its initiative, KlimaExpo.NRW, to tackle the challenges of the energy transition (switching from fossil fuels to renewables) and to make the adjustments needed to prevent climate change. Over the next eight years, this initiative will be showcasing exemplary projects – that are doing precisely this – to as large an audience as possible.

Brancheninitiative Klimaschutz durch Kreislaufwirtschaft

The objectives behind the NRW government's ten-year initiative are not only to provide a prominent platform to present the wealth of expertise, technologies and processes used across North Rhine-Westphalia to combat climate change but also to make them known beyond the state borders. The waste management sector has also felt a deep commitment to protecting our climate and natural resources for many years now. In order to drive forward this goal, therefore, a number of stakeholders within the industry decided to found "Klimaschutz durch Kreislaufwirtschaft e.V." [Recycling to prevent climate change], a non-profit organisation primarily made up of waste management associations and many waste management and recycling companies based in NRW. REMONDIS, of course, was one of the founding members and is also on the board. The aim of the organisation is not only to support KlimaExpo.NRW as a partner but also to ensure the sector itself creates its own momentum to spur on the project. Providing a united front, it will be focusing on promoting measures to slow down climate change.

The beginning of a strong partnership

The organisation's inaugural event took place in SASE's exhibition hall in Iserlohn on 15 June under the patronage of the NRW Minister for the Environment, Johannes Rimmel.

Mr Rimmel also held the keynote speech, during which he highlighted the contribution made by the recycling industry towards preventing climate change. Moreover, the organisation was named an 'official partner' of KlimaExpo.NRW. Attended by around 100 people from the worlds of business, politics and water management, the event officially launched the future collaboration work between the stakeholders.

Coesfeld biogas plant already an officially recognised KlimaExpo.NRW project

The project to optimise organic waste recycling activities in the district of Coesfeld has already been added to the list of officially recognised KlimaExpo.NRW projects. RETERRA, one of the leading businesses processing and recycling biowaste in Germany, opened its biogas plant on the grounds of the compost plant in Coesfeld last year. Dr Heinrich Dornbusch, senior managing director of KlimaExpo.NRW, explained that this project had been singled out because it not only meant that fewer fossil fuels were needed as the biogas was fed into the natural gas network but also because the systematic use of the energy and material contents of the organic waste had helped to reduce waste charges. "This is a particularly positive aspect as we have been able to demonstrate that environmental protection can go hand in hand with cost savings," Dr Heinrich Dornbusch concluded. REMONDIS is intending to submit further projects to the KlimaExpo.NRW to demonstrate other ways of combating climate change.

(from left to right) Thomas Patermann, VKU NRW, Deputy Chairman of Klimaschutz durch Kreislaufwirtschaft e.V., Hartmut Haeming, INWesD, Treasurer of the Association, Dr Heinrich Dornbusch, CEO of Expo Fortschrittsmotor Klimaschutz GmbH, Johannes Rimmel, Minister for Climate Protection, Environment, Agriculture, Nature Conservation and Consumer Protection for NRW, Ernst-Peter Rahlenbeck, Chairman of the Association, Wolfgang Jung, Managing Director of Expo Fortschrittsmotor Klimaschutz GmbH, at the inaugural event in Iserlohn



Freiburg – A textbook example

THE ASF: A PERFECT EXAMPLE OF A SUCCESSFUL PUBLIC PRIVATE PARTNERSHIP

“Freiburg has got what everyone is looking for ...” is one of the well-known mottos of this city, situated on the edge of the Black Forest. Abfallwirtschaft und Stadtreinigung Freiburg, aka ASF, plays a major role in ensuring that local inhabitants and visitors alike have a positive impression of this historic university city. This public private partnership (PPP) owned by the City of Freiburg and REMONDIS illustrates perfectly just how successful the PPP business model can be in Germany.

Located in the Breisgau region between the Rhine and the Black Forest and with a climate that is almost Mediterranean, Freiburg is a truly green city. The people living and working there have high expectations when it comes to quality of life and cleanliness and it is ASF's task to make sure these expectations are met. With around 330 employees and 165 vehicles, the company is on the road every day collecting the city's different waste streams and transporting them to environmentally friendly facilities where glass, paper and sales packaging can be recycled or organic waste transformed into high quality compost and biogas. Thanks to the collaboration between REMONDIS and the City of Freiburg, ASF is now able to recycle around 80,000 tonnes of waste – helping to protect the environment and prevent climate change.



The atmosphere was excellent at the event. (from left to right) Michael Broglin, Managing Director of ASF, Dr Dieter Salomon, Mayor of the City of Freiburg, Norbert Rethmann, Honorary Chairman of the supervisory board of RETHMANN SE & Co. KG, Heinrich Zölzer, former member of the supervisory board, and Eckardt Vogt, Managing Director of REMONDIS South

The decision of the Baden-Württemberg committee of the VKU (German Association of Local Public Utilities) responsible for waste management and city cleaning services to hold their meeting at Freiburg's Concert Hall on 08 and 09 July 2015 was, therefore, a most suitable choice. Many speeches were held during the two days on subjects such as quality management, occupational health management, collective bargaining laws and work protection. A number of people from various different groups explained how they saw the “Future of the Recycling Sector”. Mr Helmfried Meinel, Head of the Ministry for the Environment, Climate Protection and the Energy Sector at the Baden-Württemberg

state parliament, also held a speech at the event. The VKU was represented by the association's Vice President, Mr Patrick Hasenkamp. Dr Alexis von Komorowski described the recycling sector from the point of view of the leading public sector associations. The view of the private sector recycling industry was presented in detail by the honorary chairman of the supervisory board of RETHMANN SE & Co. KG, Mr Norbert Rethmann. Most of those present agreed on one thing: the discussions regarding the new recycling law will continue for a number of months yet. In the meantime, the ASF is already demonstrating today just how local inhabitants can benefit when recyclables are collected and treated efficiently.





“The new recycling law should prescribe ambitious recycling rates”

A COMMENTARY ON THE PLANNED REFORMS
TO THE WASTE MANAGEMENT SECTOR

Franz Untersteller MdL, Minister of the Environment,
Climate Protection and the Energy Sector for the
German state of Baden-Württemberg

A new recycling law is soon to be drawn up in Germany. Its primary aim should be to make the very most of the potential hidden in municipal waste in order to drive forward raw material efficiency. The potential increase in recycling volumes should not fall by the wayside because of disputes about who is responsible for what. There is no reason why the responsibility for putting volumes out to tender should not be handed over to local authorities, if contracts are awarded in an environment of fair competition and private sector firms are not ousted from the market as a result of in-house agreements. A guest commentary by Franz Untersteller MdL, Minister of the Environment, Climate Protection and the Energy Sector for the German state of Baden-Württemberg, on the new recycling law and on reorganising the system used to collect recyclables in Germany.

20 years ago, our landfills were overflowing and those responsible had no idea what to do with the growing volumes of waste. This was the point when the idea of product responsibility came into being – the idea that waste packaging should be taken back by retailers. Producers offered to pick up the packaging themselves straight from the

a chance! The only environmentally friendly outcome has been that a certain amount of the plastic packaging must be recycled for re-use. This is all far too little looking at the technology available!

“It is high time that a clear decision is made and a reliable environment created for investments to be made.”

consumers. However, instead of developing a genuine take-back system, they organised the so-called ‘dual system’ alongside the public waste collection services. They added the cost of this to the price of their products – a hidden mark-up for packaging that consumers have been paying ever since.

And what about the original objectives? Smaller packaging and less waste thanks to product responsibility? Not

Few environmental advantages, high costs – for me, that can only mean one thing: ‘dual systems’ are nonsense, at best an end in itself but most certainly not a model suitable for a modern waste management sector. We should, therefore, do away with this system. Why not hand over the responsibility for waste packaging to local and district authorities? They are not only able to do this work, they want to do it.

Initiated by the German state of Baden-Württemberg, we worked together with the states of Bremen, Hessen, Lower Saxony, North Rhine-Westphalia, Rhineland-Pfalz, Schleswig-Holstein and Thüringen to draw up a model for a modern recycling law. In this model, the responsibility for organising the collection of packaging waste and non-

“Experience has shown that the ‘dual system’ has some major weaknesses, especially when it comes to finding stable and adequate funds to finance the service. All suggestions to improve the system are welcome. What is essential, however, is that such suggestions include the private sector so as to promote fair competition. This is the only way to guarantee that consumers will continue to receive the best possible service for the best possible price.”

packaging waste made of similar materials is handed over completely to local authorities. A central organisation should then be set up which is in charge of putting the sorting and recycling of the recyclable materials out to tender so that there continues to be competition in this area.

The clear division of responsibilities in our model takes the interests of the municipal waste management companies and those of the private recycling sector into account in equal measure. Moreover, the new system is much easier for consumers to understand as transparency would be greatly increased.

I truly believe that the simpler the collection system and the clearer the division of responsibilities, the more effective and cheaper the final outcome will be. The development of the ‘dual system’ over the last 20 years clearly shows that inordinate differentiation does not improve matters – and this can also be seen by the discussions about how the system should be financed.

By the way, I also believe that it is essential that manufacturers and retailers are included in our model and that they should pay a proportion of the costs for collecting, sorting and recycling the materials. Whether it be a resource tax, a fee or a licence solution via a central organisation – I am sure that we can find a decent solution if we put our heads together.

It goes without saying for me that the new system must not lower environmental standards. On the contrary: the new recycling law should prescribe ambitious recycling rates, especially for plastics, with a minimum 50 percent of the collected volumes being sent for materials recycling and not just the licensed amounts, as has been the case so far. Innovations have ground to a halt over the last few years – also because the legislator has failed to set ambitious recycling rates. We must alter this situation asap!

I deliberately talk about recyclables here. Our goal must be to collect recyclables using as simple a system as possible and to ensure they are sent for high quality recycling. With the overall objective being to conserve our planet’s natural resources, it makes absolutely no difference whether the recyclables are generated from packaging or non-packaging, especially when it involves composites, plastics and metals.

Following years of stagnation and the many discussions on the future of collecting recyclables, it is high time that a clear decision is made and a reliable environment created for investments to be made. It is to be feared, however, looking at the key parameters submitted by the Federal government for the new recycling law, that the current outdated system is likely to be further strengthened. I will continue to argue in favour of our model so that we can achieve our environmental objectives and so that private sector businesses and municipal waste management companies have the security they need.

“Our goal must be to collect recyclables using as simple a system as possible and to ensure they are sent for high quality recycling.”



“The new recycling law should prescribe ambitious recycling rates – a minimum 50 percent of all collected materials.”

FRANZ UNTERSTELLER MDL

Minister of the Environment, Climate Protection and the Energy Sector for the German state of Baden-Württemberg

Franz Untersteller began working for the Institute for Applied Ecology in Freiburg while studying Engineering (majoring in landscape planning) at university; he held a seat on the Institute’s board between 2002 and 2011. He earned his political spurs between 1983 and 2006 when he advised the Baden-Württemberg Green Party on environmental and energy issues. He has been a parliamentary party member of the Green Party in the state parliament of Baden-Württemberg since 2006 and was the party’s deputy chairman until 2011. He was appointed Minister of the Environment, Climate Protection and the Energy Sector for the German state of Baden-Württemberg in May 2011.

Apprenticeships – Working for the future

617 NEW APPRENTICES LAY THE FOUNDATION STONE
FOR THEIR FUTURE CAREERS

REMONDIS®

WORKING FOR THE FUTURE

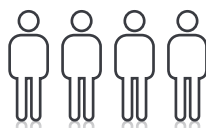
It's not so easy to go out and save the world "just like that". Young people can, however, take a great step towards achieving this goal by beginning an apprenticeship at REMONDIS or at one of its sister companies, SARIA and Rhenus. Everything at REMONDIS focuses on sustainability, protecting the environment and conserving our planet's natural resources. "Being one of the industries of the future, our three fields of business – recycling, services and water management – are all targeted at values such as sustainability, efficiency, resource conservation and climate protection. This makes our company particularly attractive to young people just starting out on their career," explained REMONDIS board member, Thomas Conzendorf.

Once again, the group has been taking action to counteract the skills shortage by offering a comprehensive apprenticeship programme this year. The fact that it currently has 2,000 apprentices learning a range of approx. 50 different professions effectively speaks for itself. This year, 617 young people have joined the company, one of the largest privately owned businesses in Germany, to do an apprenticeship. The apprenticeship programme offered by REMONDIS, SARIA and Rhenus is particularly important for the German state of North Rhine-Westphalia where some towns have been struggling as their economies have undergone structural change. 100 of the new apprentices alone are based in North Rhine-Westphalia.

There are currently more than

31,000

people working at REMONDIS



Excellent opportunities

Future apprentices get to choose from a long list of professions ranging from motor and environmental technology, to metal, chemistry, IT, logistics, craftsmanship work, mechatronics, electronics and electrotechnology, all the way through to a variety of commercial professions. Looking at the 'Top 3' most popular professions, 21 new apprentices are now training to become an automotive mechatronics engineer and 52 to become industrial clerks. The most popular apprenticeship is the course to become a professional truck driver with 92 new apprentices joining the company. "There is a huge demand for specialists in this field and so the apprentices will have an excellent chance of finding a secure job in the future," Herwart Wilms continued. Indeed the chances of being taken on after any apprenticeship are very high – with the rate currently lying at well over 70 percent. Many opportunities are open to apprentices within the company once they finish their course – both to gain further qualifications and to make their way up the career ladder.



The chances of being taken on by REMONDIS after an apprenticeship are very high indeed.

The apprenticeships themselves are also very interesting and varied, as REMONDIS and its subsidiaries and sister companies offer such a wide range of services and products.

New careers page

REMONDIS has already advertised many new apprenticeship jobs for next year's intake. Those interested can find out more about the positions on offer and hear what current apprentices have to say about their work by going to the REMONDIS Group's new careers page, remondis-karriere.de. A new video shows a number of apprentices from different fields talking about their job and why they decided to apply to REMONDIS. Young people, who wish to learn more about how their future career at REMONDIS may be, can take the interactive apprentice test. "By assessing their own skills, strengths and interests and answering some questions about what kind of environment they would like to work in, the system is able to short list what professions might suit them best and to present them with a detailed list of suggestions," explained Kristina Rehahn, head of apprenticeships at REMONDIS. If they decide to apply to REMONDIS, they can then watch a video that explains the group's application process and also gives some useful tips.

Besides this section for future apprentices, the new careers page also provides information and lists vacancies for university students, graduates and, of course, people looking for a new job. "We have created a central platform with our new careers page that allows people to access the section relevant to them – whether they be a talented young person with the skills to be a future manager or fully qualified specialists with experience of their profession. Whether they be an engineer, IT specialist or logistics and sales expert – everyone is able to find out whether opportunities may be waiting for them at REMONDIS," commented Alexa Dierks, head of personnel development. At the moment, REMONDIS has more than 31,000 employees carrying out their day-to-day tasks to protect the environment and prevent climate change – responsibly and competently, working for the future.

The new careers page (remondis-karriere.de) provides potential applicants with information specific to their qualifications

This year,

617

young people have joined one of the largest family run businesses in Germany to do an apprenticeship



Recycling operations strengthened in Poland



ACQUISITIONS BOOST LOCAL PRESENCE AND ENSURE REMONDIS IS EVEN CLOSER TO ITS CUSTOMERS

At the beginning of June, REMONDIS signed an agreement confirming its acquisition of the Polish recycling business, Gansewinkel Polska Sp. z o.o., from the Dutch van Gansewinkel Group. In August, REMONDIS then announced its takeover of Becker Polska Sp. z o.o., a company previously owned by the German waste management specialists, Jakob Becker. Both acquisitions will help to further cement REMONDIS' leading position in Poland's emerging recycling market.

REMONDIS provides numerous Polish cities and commercial customers with a whole range of recycling and water management services

Poland has ambitious plans for its waste management sector and has introduced new laws that should greatly improve the recycling levels of its municipal waste. Its overall objective is to have reduced its use of landfills from the current very high rate of 78 percent to zero by 2020. Instead, the country is looking to achieve recycling rates of 50 percent.

regions. For some this means completely withdrawing from the Polish market. In contrast, REMONDIS continues to see Poland as one of its main markets. The current capacity gaps in the regional recycling markets and the country's decision to grow materials recycling across Poland have both opened up business opportunities for REMONDIS, as can be seen by its acquisition of van Gansewinkel Polska and Becker Polska.

Dr Marek Gebski,
Managing Director
REMONDIS Poland



Faced with these sweeping changes in the Polish waste management sector, a growing number of medium-sized waste management businesses, such as van Gansewinkel and Becker, are turning their focus to their core

Operations strengthened in the south of Poland

Thanks to the acquisition of van Gansewinkel Polska, the company will, above all, be able to extend its business activities in the Lower Silesian market. Torsten Weber, managing director of REMONDIS International, commented: "van Gansewinkel Polska's range of complementary services fits

The goal is to reduce landfill use from the current



REMONDIS' portfolio perfectly. We can now strengthen our operations in the south of the country. An ideal addition that will help round off our presence in Poland."

Under the terms of the agreement, REMONDIS is to take over all of the van Gansewinkel Group's recycling and public sector services in Poland. With an annual turnover of more than 100 million Polish zloty, the company employs 320 people and runs three recycling plants. It offers its services via its branches in Krakow, Ruda Slaska, Tarnow, Olawa and Legnica. REMONDIS is planning to invest in the company in order to strengthen and expand its business activities.

Regional growth in the south west

Becker Polska, acquired by REMONDIS with retroactive effect from 01 January 2015, has been operating in the Lower Silesian Voivodeship since 1998. The company deals with commercial waste in and around the south-west Polish town of Polkowice, offering a range of services such as collecting, packing and selling recyclables as well as collecting and transporting industrial and hazardous waste. One of its main activities is collecting, compacting and selling paper, card and cardboard.

REMONDIS is well acquainted with this market as it already has its own branch in Miroslawice near Wroclaw and – thanks to the acquisition of van Gansewinkel Polska – in Legnica, around 40 kilometres south of Polkowice. Here, too, REMONDIS believes that it will be able to grow the business, especially with the new law banning calorific waste being sent to landfill coming into force in 2016.

Dr Marek Gebiski, managing director of REMONDIS Sp. z o.o., commented: "This acquisition of Becker Polska is a further step towards achieving our goal of strengthening our regional presence in the Polish waste management market – a market which is gradually turning into a genuine recycling industry and supplier of raw materials. By extending our activities in the Lower Silesian region, we are able to be even closer to our customers and help ensure that Poland continues to have a guaranteed supply of raw materials."

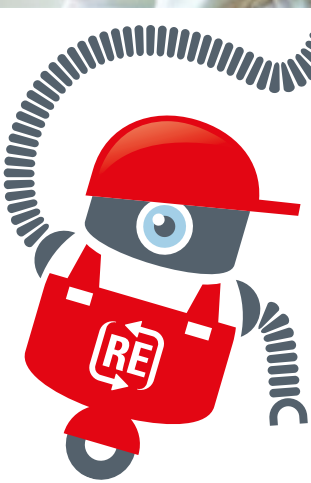
A strong position in a growth market

The REMONDIS Group currently handles more than 1.5 million tonnes of recyclables and residual waste in Poland every year. At the same time it collaborates with over 200 local authorities across the country. Its now expanded network and strong regional presence will ensure that the company continues to be a success in Poland's expanding recycling market.

REMONDIS has been operating successfully in Poland since 1992 and built its new head office in Warsaw in 2011

Thanks to the acquisition of van Gansewinkel's and Becker's Polish operations, REMONDIS has further strengthened its presence in the south west of Poland





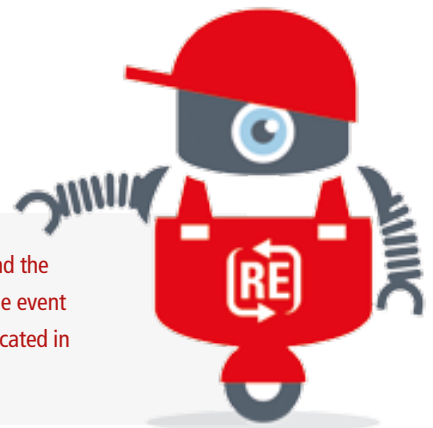
Children call for a better world

THE RECYCLING PROFESSIONALS A GREAT SUCCESS AT THE FIRST KIDS CLIMATE CONFERENCE IN GERMANY

Shaping the future is something that only adults do? You must be joking! Around 150 children and teenagers, aged between 8 and 14, took charge of this subject at the first Kids Climate Conference held in Germany this June. During the event, they took part in seven different workshops to discuss the subjects of consumption and handling resources responsibly and to develop their own vision for a better, more environmentally friendly way of life. REMONDIS' RECYCLING PROFESSIONALS were also there to organise two workshops that used a host of creative ways to teach the children more about avoiding waste, segregating waste correctly and recycling.



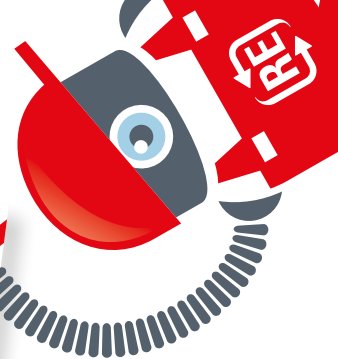
The Kids Climate Conference was first set up in the Netherlands by Center Parcs and the WWF. It is targeted at children and teenagers aged between eight and fourteen. The event took place in Germany for the first time this year. It was held in the Center Parcs located in the Hochsauerland region.



Focus was put on segregating waste correctly during the film workshop



The film workshop united environmental education and acting



“And action!” was the motto of the RECYCLING PROFESSIONALS’ first workshop. Using a pre-prepared backdrop, each of the seven groups of children was given the task of making a short film to answer the question: “How to best separate recyclable waste?”. A professional film director was on hand to help the children and work with a camera team to put the scenes together. Many of the children proved to have a natural talent for acting and they made the most of the leeway given to them to give free rein to their imagination and creativity. The educational side of the project was not neglected here though, as the children learned that everyone can help to segregate waste correctly and return recyclables to production cycles so they can be re-used. The kids left the film set and the workshop as real RECYCLING PROFESSIONALS.

A sculpture made from recyclable materials

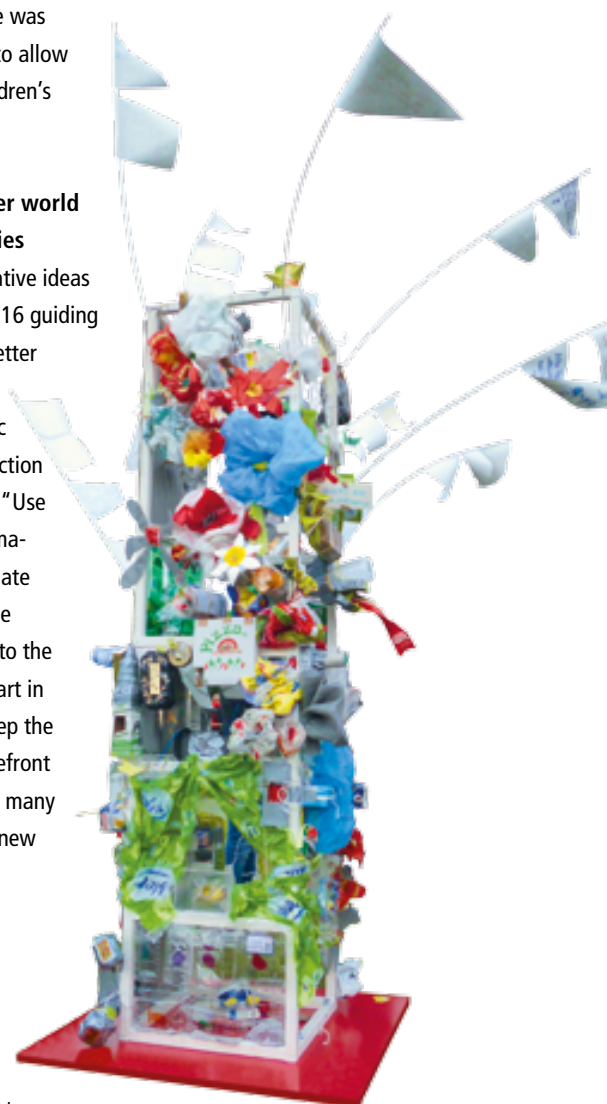
The RECYCLING PROFESSIONALS’ second workshop concentrated on how to avoid waste. Much too much waste is produced every day. Can this waste be put to good use? The answer to this question was a resounding ‘yes’ and the children at the Kids Climate Conference set about creating a sculpture made of recyclables to get their message across. The children used packaging materials such as PET bottles, egg cartons, plastic bags, tins and many other objects to make small pieces of art with hidden messages and wishes that were then attached to a wooden pillar. Assisted by an art teacher, they gradually created one large piece of art made of avoidable waste. “Whilst they were at the workshop, many of the children began thinking of ways of how they could avoid generating waste in the future and developing alternative ideas. By working with the materi-

als, therefore, they became more aware of how waste is a problem. And this is exactly what we are looking to achieve with this workshop,” explained Johanna Spinn, head of the RECYCLING PROFESSIONALS project. The sculpture is first being displayed at the office of the mayor of Medebach, where the Kids Climate Conference was held. It will then be taken on tour to allow many more people to read the children’s wishes and ideas.

16 guiding principles for a better world and better environmental policies

On the final day, the children’s creative ideas were brought together to draw up 16 guiding principles for a better world and better environmental policies. Doable visions – such as “Don’t buy plastic bags”, “Have environmental protection put on the school curriculum” and “Use car-sharing schemes” – were summarised and added to a so-called climate book. To keep the subject going, the climate book is to be handed over to the mayor and the schools that took part in the conference. This will help to keep the Kids Climate Conference in the forefront of their minds and help to make as many people as possible aware of these new ideas.

“Turning old into new” was the motto of the RECYCLING PROFESSIONALS’ creative workshop



A work of art made from avoidable waste – the children’s sculpture made of recyclables

“Working together to grow sustainability”

IMPRESSIVE RESULTS IN COMPANY’S 3RD CUSTOMER SURVEY

The motto of REMONDIS’ third major customer survey clearly reflects how REMONDIS sees its business relations with its customers. “Working together to grow sustainability” underlines, on the one hand, the aspect of sustainability – the guiding principle behind all of the company’s operations. On the other hand, the word ‘together’ also emphasises the fact that the company’s aim is to build up partnerships with its customers. As a family-run business, REMONDIS not only acts in the interest of its customers but also – more specifically – together with them. The results of the company’s third customer survey are impressive and clearly show that this philosophy is much appreciated by its customers.



88%

of REMONDIS’ customers
would recommend the
company to others

Firms looking to provide suitable, cost-effective and high quality services are well advised to listen closely to what their customers have to say. At the end of the day, who else is in a better position to judge whether the services run smoothly and where there is room for improvement? Having conducted surveys in 2009 and 2012, REMONDIS decided to send out questionnaires to its customers again this year.

“The company achieved better results in all the categories compared to the last two surveys, particularly in response to how it actually delivers its services,” commented Dominik Wolff, managing director of the market research institute commissioned to conduct the survey. With a customer satisfaction index of 82 points and a recommendation rate of 88 %, REMONDIS’ customers have given the company an impressive reference.

By conducting surveys at regular intervals, it is possible to see just how effective the measures have been that were introduced in response to the results of previous surveys. One example here was the layout of the company’s invoices which had been criticised by a number of customers in the past. REMONDIS’ response was to take a detailed and critical look at the way its invoices were structured in order to make them more customer friendly. The company was, therefore, particularly pleased to see that the results of this year’s survey regarding the layout of its invoices were much improved. REMONDIS was also very grateful to receive the comments and suggestions for improvement from its customers this year. These show REMONDIS where it can improve its operations and further increase the quality of its services.

Following the motto “Working together to grow sustainability”, a new category was added to the now familiar questionnaire this year that looked into the subject of sustainability. The amazing and extremely pleasing result: 82 % of the REMONDIS customers who took part in the survey

said that sustainability was an important issue in their business. Together with its customers, the REMONDIS Group is looking to tackle the two huge challenges facing our society today: slowing down climate change and conserving our planet’s natural resources to prevent a shortage of raw materials. Industrial and commercial customers can now provide proof of how successful they have been in these areas with the unique Sustainability Certificate. For many customers, this certificate is far more than simply a PR tool. Across the world, companies are increasingly being put under pressure by their own customers to prove that they run a sustainable business. In a number of markets, such as the hotel and restaurant business and the automotive industry, such proof is gradually becoming obligatory to be awarded contracts and so build up a loyal customer base. REMON-



DIS’ Sustainability Certificate enables customers to provide written proof of how their waste management system and the subsequent recycling of their waste cut carbon emissions and reduce consumption of primary raw materials and energy, clearly expressed in tonnes and kilowatt hours. And it is a truly unique certificate within the recycling industry – something that was also confirmed by the survey, with the company’s customers showing a great interest in the product. Many customers asked to be given more detailed information about how they can grow sustainability together with REMONDIS in the future.



REMONDIS’ Sustainability Certificate is a unique way for customers to add value to their business

(from right to left) Dominik Wolff, from the Wolff Institute, presents the results of the survey to Dagmar Sopora (head of sales control) and Christian Monreal (manager of the customer survey project)



Ferrero – sweet sustainability



FERRERO AND REMONDIS JOIN FORCES IN TURKEY

There are a few obvious parallels between this well-known international sweets manufacturer from the Italian region of Piedmont and REMONDIS. Both are successful, family-run companies. Both businesses can look back at a long history that began in the first half of the 20th Century. Ferrero's story started when Piera and Pietro Ferrero turned their small pastry shop into a factory in the 1940s. Josef Rethmann was a little earlier off the mark: in the middle of the 30s, he laid the foundations for what has now become one of the world's largest recycling, water and service companies. Family tradition, reliability and the highest possible quality standards – these are values that unite the two companies and ensure that their collaboration work in Turkey is such a success.

REMONDIS

WORKING FOR THE FUTURE

FERRERO

FERRERO and REMONDIS –
a collaboration in Turkey
between two family-run
companies full of tradition

You might be excused for thinking that Ferrero and REMONDIS are worlds apart. Food and confectionery on the one hand, waste management and recycling on the other. This, however, is the most important point. Ferrero, now in its third generation and run by CEO Giovanni Ferrero, is committed to sustainability and to protecting the environment throughout the whole of its operations, starting with the manufacturing and packaging of its products. This automatically includes making sure that high quality collection and recycling systems are in place for managing its waste. REMONDIS offers such services in 34 countries around the world, including Turkey.

Ferrero International S.A., the parent company of the Ferrero Group, comprises 74 individual firms with 20 production plants. Ferrero products, such as the famous Mon Cheri chocolates, nutella and Kinder Kids collection, are sold in over 16 countries around the globe. In 2014, Ferrero had a workforce of just under 28,000 employees and a turnover of approx. 8.4 billion euros.

34

REMONDIS offers waste collection and recycling services to its customers – such as Ferrero – in 34 different countries



Ferrero's new plant near Izmir produces the well-known Ferrero food and snacks for Turkey, Greece, the Middle East, India and a number of other countries

Ferrero Manisa, Turkey

One of Ferrero's newest plants can be found in a modern industrial estate in Manisa, a city situated around forty kilometres north-west of Izmir. This 27,500m² facility has been manufacturing a number of the company's products since 2013 – primarily chilled snacks, such as Pinguì, and Ferrero's global bestseller nutella, which is not only sold on the Turkish market from here but also exported to Greece, the Caucasus, India, the Middle East and Cameroon. 180 employees work here in a three-shift operation six days a week. The Turkish authorities have officially named the facility as being "particularly sustainable" in recognition of its unusually high environmental standards. This includes its low consumption of raw materials, its extremely low air and noise pollution levels and, in particular, its exemplary waste management system and recycling rates. The amount of waste generated there since the plant was commissioned has already been reduced by 30%. REMONDIS' task is to ensure that the rest is separated into individual waste streams and then sent to environmentally friendly recycling facilities. All waste packaging, pallets and vegetable oils are fully recycled; food waste from the production plant is used to make animal feed. The only waste streams that must be disposed of are residual waste that cannot be sent for materials recycling and mixed household waste. Whilst the latter is still sent to landfill in accordance with Turkish laws, the former is transformed into refuse-derived fuel for cement works.

REMONDIS has set up a bespoke system of recycling containers for each waste stream at specific points around the factory grounds to ensure that the employees from the various departments separate their waste at source. The advantages speak for themselves. Firstly, this system automatically increases the employees' awareness of environmental issues as they actively help to protect the environment and prevent climate change as part of their everyday work. Secondly, there is no need to take on extra staff. Moreover, material recycling rates have greatly increased as the waste is separated so effectively.

REMONDIS carries out all waste management and recycling tasks for Ferrero in Manisa, organises the marketing of the recovered raw materials and provides the company with advice on all aspects of recycling technology and optimising material streams. Ferrero benefits from this collaboration in a number of ways. This turn-key waste management system and immediate support not only save them time and money – REMONDIS also helps to ensure that this sweet side of life is based on sustainable foundations.

REMONDIS increases sustainability at FERRERO and saves them time and money



Mehmet Emin Bakalci,
Managing Director of
REMONDIS Turkey

Mercury – back to nature

NQR: A NEW BUSINESS LOCATION AND PATENTED PROCESS TO STABILISE MERCURY

NQR

WORKING FOR THE FUTURE

NQR, a fully owned subsidiary of REMONDIS Industrie Service, specialises in treating materials that contain mercury. Having successfully introduced 'PLOM B' in the autumn of 2013 – a new service for collecting small volumes of amalgam waste from dental surgeries – NQR further expanded its business in September 2014 when it took over a new branch in the German city of Dorsten. Previously owned by DELA, the premises are situated on the northern edge of the Ruhr region and have excellent connections to Europe's close-knit network of roads.



NQR's facility in Dorsten transforms mercury into cinnabar – as it is found in nature

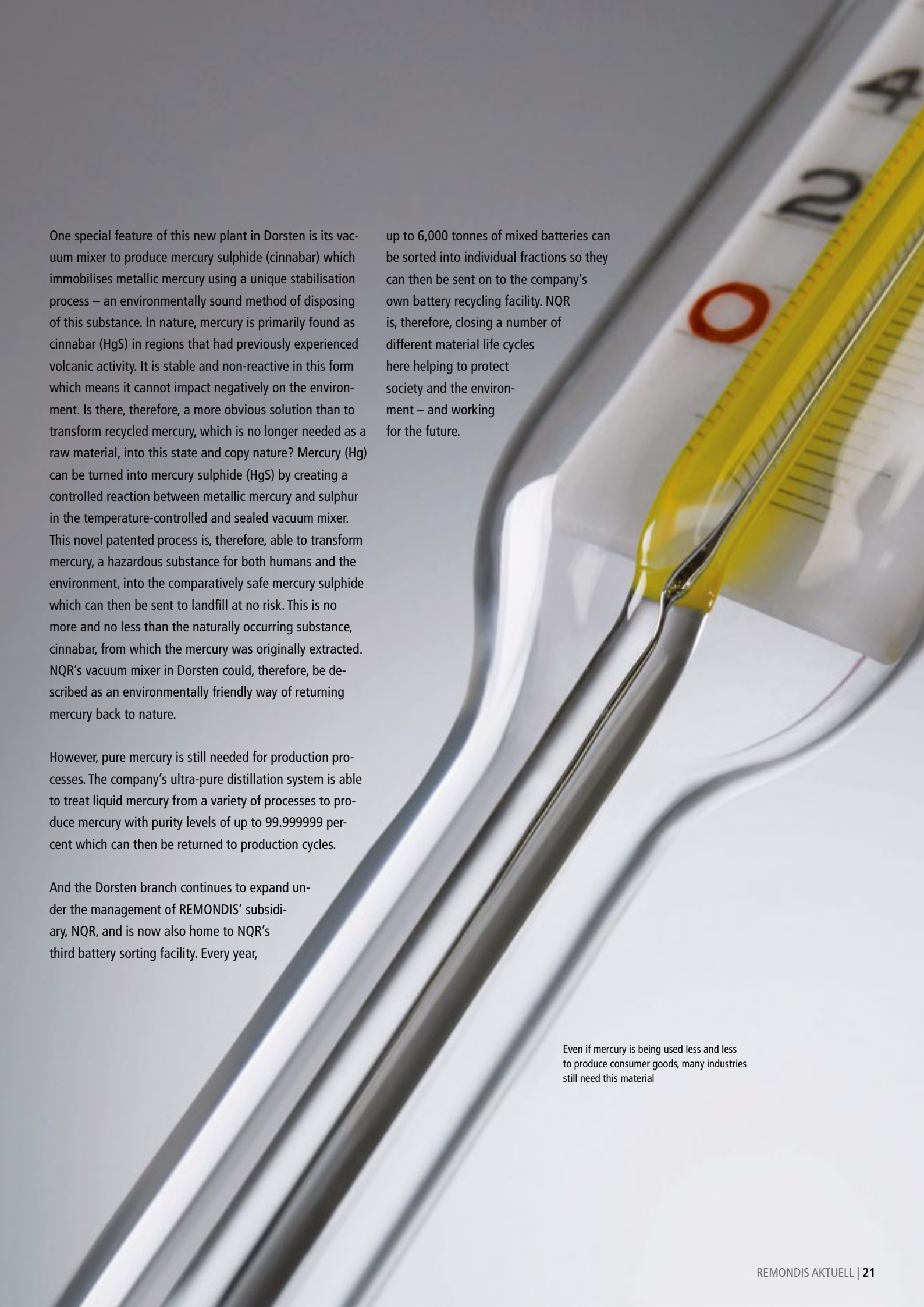
Mercury – also known as quicksilver – is a remarkable substance. It is the only metal that is liquid at standard room temperature and pressure. As mercury has such high surface tension, it does not wet the non-reactive surface it is on but instead forms a shape like a lens (due to its strong cohesive forces). It conducts electricity like any other metal although only at a low rate. It is precisely these unusual

properties that has made mercury such an interesting substance for manufacturing products over the years. Unfortunately, mercury is also toxic which is why some industrial businesses are now substituting it with other substances. However, mercury is still being used in many applications which opens up the question of how to recover and recycle it. Once again, REMONDIS has some good news here.

NQR's branch in Dorsten processes industrial waste containing mercury for its customers and suppliers who come from a whole range of different sectors and from all around the world. One of the central pillars of this recycling work is the facility's rotary distillation unit with its afterburner and flue gas cleaning system. This plant processes activated carbon, button cell batteries, contaminated earth and filter media from the crude oil and natural gas industry, chlorine producers as well as from the chemicals industry. Moreover, NQR is able to process industrial sludge containing mercury in its vacuum dryer.

Mercury was discovered back in ancient times. NQR's state-of-the-art mercury recycling systems are a more recent development





One special feature of this new plant in Dorsten is its vacuum mixer to produce mercury sulphide (cinnabar) which immobilises metallic mercury using a unique stabilisation process – an environmentally sound method of disposing of this substance. In nature, mercury is primarily found as cinnabar (HgS) in regions that had previously experienced volcanic activity. It is stable and non-reactive in this form which means it cannot impact negatively on the environment. Is there, therefore, a more obvious solution than to transform recycled mercury, which is no longer needed as a raw material, into this state and copy nature? Mercury (Hg) can be turned into mercury sulphide (HgS) by creating a controlled reaction between metallic mercury and sulphur in the temperature-controlled and sealed vacuum mixer. This novel patented process is, therefore, able to transform mercury, a hazardous substance for both humans and the environment, into the comparatively safe mercury sulphide which can then be sent to landfill at no risk. This is no more and no less than the naturally occurring substance, cinnabar, from which the mercury was originally extracted. NQR's vacuum mixer in Dorsten could, therefore, be described as an environmentally friendly way of returning mercury back to nature.

However, pure mercury is still needed for production processes. The company's ultra-pure distillation system is able to treat liquid mercury from a variety of processes to produce mercury with purity levels of up to 99.999999 percent which can then be returned to production cycles.

And the Dorsten branch continues to expand under the management of REMONDIS' subsidiary, NQR, and is now also home to NQR's third battery sorting facility. Every year,

up to 6,000 tonnes of mixed batteries can be sorted into individual fractions so they can then be sent on to the company's own battery recycling facility. NQR is, therefore, closing a number of different material life cycles here helping to protect society and the environment – and working for the future.

Even if mercury is being used less and less to produce consumer goods, many industries still need this material

New technology for handling hazardous waste

SAFETYTRUCK NOW ON THE ROADS IN SWITZERLAND



Hazardous substances and undeclared waste from households must be collected and treated using a system that is just as safe and just as compliant as the processes used for industrial and commercial waste. REMONDIS operates its special SafetyTrucks to collect such materials in Germany. One of these state-of-the-art vehicles has now been on the roads in Switzerland since the beginning of the year.

The SafetyTruck is based at REMONDIS Schweiz AG in Switzerland. From here, it is able to serve the whole of the canton of Schaffhausen. Besides collecting materials on behalf of the local authorities, it is also being deployed to pick up hazardous waste from, for example, university laboratories, pharmacies and hospitals.

Just as is the case in Germany, the Swiss SafetyTruck is kitted out with state-of-the-art equipment. The pioneering safety technology ranges from explosion-proof electrical units all the way through to liquid, acid and chemical-resistant flooring. The driver is accompanied by a highly qualified specialist who has the relevant training and experience to handle hazardous waste. Such employees know how to accept such substances and, if the waste is undeclared, immediately take samples of the materials to classify it so it can be placed in the right storage container.

SOLUTIONS TO DRIVE FORWARD SUSTAINABILITY

REMONDIS has been operating in Switzerland for twelve years now. Its extensive portfolio includes services such as recycling materials from printing businesses, photo laboratories, medical institutes, companies and public institutions. Working together with local and district authorities, the company offers a wide range of recycling activities and many other services. The REMONDIS Group's pioneering concepts and technological edge are also apparent in Switzerland where it systematically contributes towards recovering raw materials and preserving natural resources.

This high-tech hazardous waste collection truck is proving to be a success in Switzerland as well and is expected to be deployed in other cantons in the future. "Our medium-term goal is to offer our SafetyTruck services across the whole of country," explained Mareike Krämer, head of sales at REMONDIS Schweiz AG. The company's branches in Geneva and Basel would also provide a perfect base for this truck.



From rechargeable batteries, to fluorescent lamps, all the way through to medicines: the SafetyTruck accepts a whole range of hazardous waste

UCL presents its new service app

UCL UMWELT CONTROL LABOR GOES MOBILE

UCL is an independent provider of innovative analytical services. Its customers particularly appreciate the laboratory's free online access to its information system. UCL has now extended its web offering to include a mobile service app.

UCL operates modern laboratories equipped with state-of-the-art machinery to enable it to provide its extensive portfolio of environmental, waste, drinking water and air analysis work. Its services range from taking samples, to carrying out routine analysis work, all the way through to developing bespoke processes. Registered customers can now receive an update on their projects or request the results of UCL's analysis work whenever they want and from wherever they may be. Thanks to this new app, their data can be transmitted to them quickly and securely.

A whole range of information available

The app provides the users with several different ways of calling up

information about their projects. All customers, for example, can get an overview of the different analysis work they have commissioned

and see what stage each project is at. In addition, they can track the status of their projects online in real time. Details about possible deviations from ceiling values can also be called up. Moreover, the results of sample analyses can be compared in a matrix via a smartphone or tablet and archived analyses can also be accessed. Customers, who have selected projects, samples and parameters via their app, are also sent an automatic message when the project has been completed. Potential customers interested in the company can use the app to find out more about UCL's services and about how to contact them.

Faster and more flexible data access

It is not difficult to see the advantages of this new service app. Dr André Nientiedt, a member of UCL's executive management team, explained: "Being able to call up their data like this is a huge advantage for our customers. This user-friendly app means projects are easy to track and reduces their workload."

The UCL service app is available via download stores such as the App Store and Google Play Store.

UCL offers top quality analytical work combined with the highest levels of reliability and an extensive portfolio of services

UCL
WORKING FOR THE FUTURE

Removed from the grid

RECYCLING OBSOLETE WIND TURBINES

Wind turbines, too, eventually reach a point when they are no longer fit for purpose. Earlier versions are gradually being decommissioned and replaced with larger, more efficient models. Some of these older wind turbines are being sold off on the international second-hand market. More and more, however, are having to be recycled as they have been operating for over 20 years and are reaching the end of their useful life.



As yet, little attention has been paid to the recycling of wind turbines – one of the challenges resulting from the energy transition

For years now, REMONDIS has been looking at ways of recycling obsolete wind turbines. One of the pioneers in this sector is REMONDIS Olpe GmbH. Collaborating closely with other REMONDIS companies, it offers reliable solutions that cover all aspects of this business – including the complex task of recycling the blades.

Giant structures made of composite materials

As with boats, the blades of a wind turbine are made of glass-fibre reinforced plastic, i.e. glass-fibre mats coated and held together by resin. A layer of wood may also be added to the smaller models. The length of the blade on the older onshore wind turbines is normally up to 45 metres long and weighs between 9 and 12 tonnes. The blades found in the offshore wind farms are much larger and much heavier – measuring up to 115 metres in length and weighing around 40 tonnes.

Dealing with the size of the blades and the materials used to make them are, therefore, the two main challenges that recycling companies have to face. The first task is to cut up the blades into smaller pieces (approx. 13 metres in length) on site where the wind turbine was located so that they can be transported by truck to the recycling facility.

A substitute for primary raw materials

REMONDIS operates three locations in the German state of North Rhine-Westphalia (including Olpe) that collect and repack the blade sections into larger batches, each weighing around 600 tonnes. These are then sent to REMONDIS' subsidiary, TSR. A metal recycling specialist, TSR operates high performance shredders which are able to shred the blades in just one single step so they can be conveyed pneumatically.

This reusable material is bought by cement works as all the components of the shredded blades are perfect for their business. Large amounts of energy are needed to produce cement and the wood and resin contained in the recycled material can be used as fuel. Moreover, the silicate in the glass fibre cancels out any deficits in the source materials, as the stone used by cement works has a low silicon content. If the blade pieces were not added here, then natural silicate would have to be bought in.

158 No longer fit for purpose: 158 wind turbines were dismantled in Germany during the first six months of 2015 alone



More than

24,800 wind turbines

are currently being operated across Germany. They generate approx. 9 percent of the country's electricity

Onshore and off-shore wind farms

Thanks to its high levels of expertise in this field, REMONDIS is also able to completely dismantle wind turbines. The foundations, tower, nacelle and underground cables are professionally removed and all materials generated by this process, for example concrete, steel and electronic components, recycled. This stage also involves a number of different REMONDIS companies collaborating with each other, such as REMEX, the group's specialist for processing mineral aggregate.

The cooperation work with Rhenus Logistics also creates a number of advantages here. Rhenus, like REMONDIS, belongs to the RETHMANN Group and offers a range of logistics services which also cover offshore operations. Their branches in Bremen, Cuxhaven and Emden, for example, serve wind farms in the German Bight in the North Sea.

A huge increase in volumes expected

Industry experts believe that there will be a rapid increase in the number of wind turbines needing to be recycled in the future. They predict that over 9,000 tonnes of turbine blades will need to be recycled in Germany in 2016 and that this figure will have almost doubled to around 16,000 tonnes by 2021. The growing interest in recycling wind turbines can already be seen today: the volumes that REMONDIS is expecting to recycle this year are far greater than those of the previous years.

REMONDIS Australia continues to grow

REMONDIS' POSITION ON THE FIFTH CONTINENT FURTHER STRENGTHENED BY THE ACQUISITION OF ORORA AND WATTS WASTE



REMONDIS Australia has achieved a surge in growth this year. Having purchased Orora Limited's Western Australia's recycling business and New South Wales family owned Watts Waste Pty Ltd, the company can now provide its customers with greater access to recycling and waste management solutions. The two acquisitions will significantly increase REMONDIS' presence in the Australian recycling market.



Luke Agati, Managing Director
REMONDIS Australia

With the two acquisitions, REMONDIS will have the capacity to manage in excess of 100,000 tonnes per annum of recyclable materials for commercial, industrial and municipal customers. The integration of the two firms into REMONDIS' network will bring about significant synergies in the short term and will add greater national service offerings to the company's client base in Australia.

Orora, Western Australia

Orora is based in Canning Vale, in the Southern suburbs of Perth, Western Australia. The company is the leading processor of waste paper in Western Australia and receives and processes up to 80,000 tonnes per annum of paper and cardboard predominantly. Orora provides waste fibre processing capabilities, received from commercial and municipal clients within the metropolitan and regional areas of Perth. The majority of the fibre is graded and exported to Asia. This facility was declared as a "Recycler Leading by Example" from Western Australia's State Government

recognising its outstanding efforts to increase recycling. REMONDIS Australia has current operations based in Perth's northern suburb of Osborne Park where it has a processing facility for paper and cardboard. Thanks to this acquisition, REMONDIS is now the market leader in this field in Perth.

Watts Waste, New South Wales

The Watts Waste business operates out of two depots located at Oxford Falls in Sydney's Northern Beaches, and Smithfield located in Sydney's Western Suburbs. The facilities collect a combined total of approximately 55,000 tonnes of commercial waste and around 10,000 tonnes of paper and cardboard per annum. Luke Agati, managing director of REMONDIS Australia, concluded: "REMONDIS Australia keeps growing and increasing its market share and on top of the above two acquisitions a number of other acquisitions are in the pipeline. We are thrilled about adding the two organisations to REMONDIS Australia and continuing to provide exceptional service to our customers."

Australia is one of the
REMONDIS Group's fastest-
growing core regions

! 100,000
tonnes p.a.

REMONDIS now has the capacity to manage over 100,000 tonnes per annum of recyclable materials for commercial, industrial and municipal customers

Saransk: a role model for Russia

GREENPEACE VISITS REMONDIS IN MORDOVIA

In April, Greenpeace Russia sent a 15-strong delegation to Mordovia where they visited REMONDIS' branch in Saransk. The Greenpeace members from Moscow and Saint Petersburg were accompanied by a number of journalists from Saint Petersburg and Nizhny Novgorod specialising in the field of environmental protection. Two MPs from Dzerzhinsk Duma joined the group and were also clearly impressed by the methods used to segregate waste in Saransk.

Set up by REMONDIS almost three years ago, the waste segregation system in Saransk has become part of the city's everyday life with the local inhabitants now separating their different waste streams as a matter of course. Unfortunately, Mordovia is still one of only a very small number of regions in the Russian Federation to have developed an infrastructure that enables locals to separate their waste. A very good reason, therefore, for Greenpeace to visit REMONDIS' branch to see the environmental benefits of such systems with their own eyes.

Over 500 containers with yellow lids have been distributed around the city of Saransk for disposing of old paper and plastics. On average, each inhabitant produces over 300kg of residual waste every year. Environmental pollution has also dropped considerably since this system was introduced. A special programme was organised for the visitors that included a presentation of the waste segregation project, a tour around the city to see the waste drop-off points and the recyclables sorting plant. With one of the aims of this trip being to exchange experiences, the delegation of experts also attended an event at the 36th school in the City of Saransk that focused on the subject of environmental protection. Pupils from Years 1 to 4 had prepared some interesting performances, scientific speeches and a few creative surprises on the subject. Teaching kindergarten and primary school children about environmental matters is also a particularly important subject in Russia.

Russian Minister visits REMONDIS in Germany

News about the good work being carried out by REMONDIS in Russia is obviously getting around as well – as could be seen by the visit of the Deputy Minister of Building Industry and HCA of the Russian Federation, Mr Andrey Tchibis, this



The Russian delegation with Andrey Tchibis, Deputy Minister of Building Industry and HCA of the Russian Federation (centre left), and Svetlana Bigesse, CEO Russia, REMONDIS International (centre right)

July. The minister first travelled with his delegation of ministerial staff and experts to the AVG waste incineration plant in Cologne, one of REMONDIS' public private partnership businesses. Tilo Dumuscheit, AVG's press officer, Michael J. Schneider, REMONDIS' press officer, and Dr Thomas Rummeler from the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety explained the benefits of public private partnerships for large-scale municipal waste management projects. The following day, Mr Tchibis visited the REMONDIS Lippe Plant where he was able to see for himself just how effective and efficient the private recycling sector can be. The message to the Russian partners: it is well worth it to set up a resource-friendly recycling industry as it not only protects human health, the environment and the climate but also helps safeguard future supplies of raw materials.



Svetlana Bigesse, CEO, REMONDIS International, promotes recycling across the Russian Federation

The safe disposal of Ebola waste

REMONDIS MEDISON WORKS AT THE ROBERT KOCH INSTITUTE IN BERLIN AS PART OF A TEAM OF EXPERTS

The REMONDIS Medison employees are the REMONDIS Group's experts for delivering clean and safe treatment solutions for all types of problematic waste. This also includes the professional disposal of medical and infectious waste. There is a high demand for such specialist knowledge all around the world – as could be seen in 2014 following the Ebola outbreak in West Africa.

One of REMONDIS Medison's main fields of business is delivering professional waste management solutions for handling medical waste from clinics, university hospitals, doctors' surgeries, laboratories and pharmacies

Last year's epidemic was the largest outbreak of this life-threatening virus infection that the world had ever seen. For the first time, patients outside Africa were affected by the Ebola virus. Faced with such a dramatic situation, the prestigious Robert Koch Institute in Berlin decided to set up a special working group of experts in October 2014. Their goal: to develop a safe and uniform system across the whole of the country to collect and dispose of the highly infectious Ebola waste.

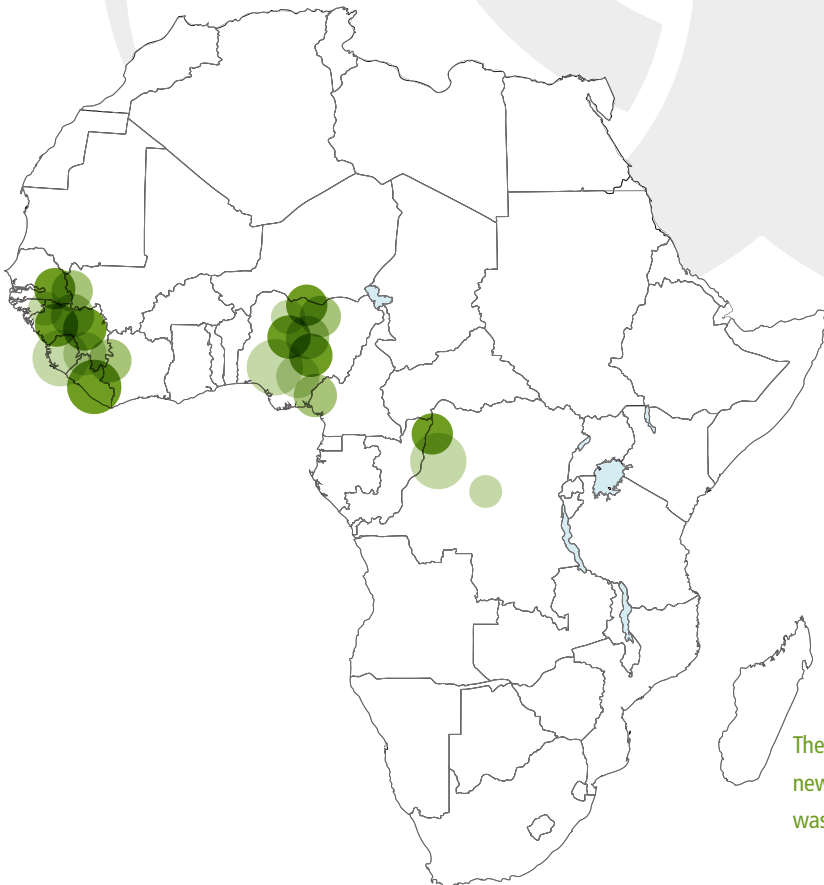
This group was made up of specialists from leading medical institutions, federal authorities, associations and the worlds of industry, science and research as well as a number of experts from REMONDIS Medison. They were able to provide valuable information on how to store, transport and dispose of medical waste.

Signing of a multilateral agreement

In principle, all waste generated in Germany as a result of treating someone suspected of having the Ebola virus disease must be inactivated on site at source. If this is not possible, then this dangerous material must be transported to a hazardous waste incineration plant licensed to handle such substances. Transport of this waste to the appropriate incineration facility is regulated by the dangerous goods act and international transport laws.

Using this information as their starting point, the team of experts at the Robert Koch Institute participated in a number of workshops to draw up practicable solutions for safely treating the highly infectious Ebola waste. One of the important outcomes of these meetings was the signing of a multilateral agreement. This regulates how such highly infectious material must be packed and transported. The focal point of this agreement is a special triple packaging solution consisting of a primary container, secondary packaging and plastic outer packaging shaped like a drum.

The outbreak of the Ebola epidemic in western Africa has led to new standards being set for managing and disposing of medical waste. REMONDIS has exceptional knowledge of this area





REMONDIS Medison employees wearing special protective clothing during the Ebola rescue exercise at Frankfurt Airport

Guidelines drawn up by REMONDIS Medison

In addition to these regulations, REMONDIS Medison developed a comprehensive waste management and logistics concept for customers who have to deal with Ebola-contaminated waste. The concept acts as a set of guidelines describing how such dangerous materials should be handled. All information about the material streams are continuously recorded, analysed and documented to create absolute transparency in all areas.

Large-scale rescue exercise at Frankfurt Airport

As potential emergency situations have to be well prepared in advance, a team of REMONDIS Medison staff also took part in a major rescue exercise. This exercise simulated the arrival of an Ebola patient at Frankfurt Airport. All individual steps were practised in as realistic conditions as possible – from the landing of the plane, to moving the patient, all the way through to disposing of the waste. All stages of this successful exercise were performed under the strictest of safety standards.



REMONDIS' SafetyTruck ensures the special packaging is transported safely

Should the need actually arise, then there is an Ebola rescue plane ready and waiting to bring the patient to Germany. The Airbus 340-300 is part of this rescue plan and would be deployed by the Foreign Office with doctors from the Robert Koch Institute. The plane, called Villingen-Schwenningen, had previously been used as a passenger aircraft and has been completely refitted for this purpose. It is equipped with three isolation cells and enables the patients to be safely flown in as well as for them to receive on-board treatment.

The first step towards a promising career

HIGH PRAISE FOR BUCHEN'S APPRENTICESHIP SCHEMES

BUCHEN®

WORKING FOR THE FUTURE

In the middle of June, the Minister President of the German state of Brandenburg, Dr Dietmar Woidke, travelled to BUCHEN's branch in Schwedt as part of his "ZukunftsTour Jugend" – a tour he has organised to promote projects that offer young people promising career opportunities in his region. BUCHEN's branch has already received a number of awards in recognition of its apprenticeship schemes and during his visit Dr Woidke was able to learn more about the apprenticeship jobs on offer. Above all, he was able to hear about how young people can train to become specialists for pipe, sewer and industrial services, a profession that is particularly important for the company.

The "ZukunftsTour Jugend" tour was organised to promote projects that offer young people promising career opportunities in the German state of Brandenburg

The Minister President of Brandenburg was welcomed to Schwedt by Norbert Rethmann, honorary chairman of the supervisory board of the REMONDIS Group, as well as by BUCHEN managing director, Franz-Josef Englisch, and area manager, Wolf-Eckhardt Wüstenhagen. Moreover, a group of current apprentices, recently qualified apprentices and apprenticeship managers joined them to discuss the company's programme. The Minister President soon discovered that he and Norbert Rethmann were very much on the same wavelength when it came to promoting young people's careers: "Providing top quality apprenticeships is a key factor for success – both for the young people and for our company as a whole."

High quality education

The BUCHEN Group, which has been part of REMONDIS for ten years now, has always promoted schemes that enable it to train young people itself and so build up its own future workforce. Each year, the company welcomes, on average,

20 new apprentices who wish to train to become a specialist for pipe, sewer and industrial services. BUCHEN's branch in Schwedt teaches them all about the practical side of their future career. And they have proven to be very good at doing this: more than 120 young people have already successfully completed this course at the company, two of whom were named best in the country – excellent proof of the high quality of the apprenticeship offered by BUCHEN.

The Minister President made the most of this opportunity to ask the apprentices what they liked most about their work at BUCHEN. All those present agreed on one thing in particular: "The apprenticeship covers a whole range of topics. We get to learn about many different fields of business, are given lots of support by our trainers and the working environment is great, too." Other positive aspects: the company guarantees to take the apprentices on, if they pass their apprenticeship exams and provides them with various opportunities to gain further qualifications.

During his visit to BUCHEN, the Minister President of the State of Brandenburg, Dr Dietmar Woidke, (3rd from left) learned more about state-of-the-art cleaning technology





One of the employees in Schwedt demonstrated how a heat exchanger should be cleaned with a high pressure water jet



A group picture in front of a mobile flue gas treatment facility: the Minister President of Brandenburg was very impressed by just how motivated the team at BUCHEN were



Norbert Rethmann and the apprentices listened to the presentations with great interest

A key success factor

BUCHEN has been offering this central apprenticeship scheme in Schwedt to train young people to become specialists for pipe, sewer and industrial services since 2008. The programme is a collaboration between the company, the 'Oberstufenzentrum' vocational college and the 'Uckermärkischen Bildungsverbund', a training association. "We have undertaken several measures to further increase the quality of the apprenticeship, including taking on a support teacher. We have also set up our own specialist workshop to allow the apprentices to hone their practical skills," commented Franz-Josef Englisch.

The Minister President was clearly impressed by his visit – not least by the company's wide range of equipment and the practical presentations given by the staff. Just a few days later, he wrote a very personal letter to the company thanking them once again for having him. He wrote: "I left with the impression that together you have created one of the most important factors for ensuring your company is a success: an open-minded and highly motivated team of employees."

Every year, BUCHEN provides 20 young people with apprenticeship jobs that offer them excellent career prospects

SPECIALISTS FOR COMPLEX TASKS

At BUCHEN, qualified specialists for pipe, sewer and industrial services are able to dismantle machinery in large industrial plants and then clean the individual parts using a variety of physical or chemical cleaning processes. They help to analyse malfunctions at plants as well as to rectify such problems. Removing dirt and deposits using high pressure water jet technology is another of their tasks as is selecting and handling industrial lances, tank washing equipment, rotating heads and the different types of jets. The prospects of making a career at the company are very good indeed: as far as technical jobs are concerned, employees can take part in further courses to become a process specialist or foreman or to gain their master qualifications. On the other hand, they can improve their organisational skills to become an operations manager or works manager.

Living on the banks of a river

TRANSFORMATION OF AN INDUSTRIAL PARK INTO TOP QUALITY RESIDENTIAL LAND

REMEX®

WORKING FOR THE FUTURE

A brand new residential area containing state-of-the-art homes is being built on what used to be brownfield land in the German city of Essen. For this to happen, comprehensive remediation work had to be carried out on this attractive site along the banks of the Ruhr River – a task for REMONDIS' company, REMEX ProTerra.



The old brownfield site has been transformed into an attractive residential area surrounded by water and open spaces

This summer, the European Commission named Essen the "European Green Capital 2017". This title underlines the pioneering role that the city authorities are playing to reinvent itself as a 'green city'. This also applies to the building project currently being completed along the banks of the Ruhr River.

A high quality and cost-effective remediation project was successfully completed with the help of REMEX ProTerra

This 45,000m² piece of land is situated in the Essen district of Kettwig, a popular place for visitors with its attractive old city centre and its location on the river. The city centre, however, had been cut off from around 600 metres of the river bank by this contaminated brownfield site. Over the years, the City of Essen had looked at ways to rectify this situation and find a new use for this area. Up until just recently, however, all attempts had failed because of the complexity of the contamination of the ground.

Years of contamination in the earth

The history of these grounds goes back all the way to the Middle Ages when they were used as a harbour and storage area. They then gradually developed into a commercial and industrial site. From the 19th Century onwards, waste materials were repeatedly added to the ground to protect it against flooding. The result was many layers of heterogeneous waste deposits, primarily made up of fire ash, furnace slag, non-mineral waste and construction waste.

The grounds remained derelict for more than two decades after the last production plant was closed down on the site in 1992. Everything changed, however, after a property development company purchased the site and began developing the grounds. REMONDIS' company, REMEX ProTerra, was selected to help it clean up the site and has been involved in the project from the very early stages.

Systematic remediation work

The company was faced with a wide range of tasks – from carrying out a detailed analysis of the actual situation, to determining remediation targets and drawing up the remediation plan, all the way through to implementing the operation including all demolition, excavation, waste management and recycling work. The project team responsible for developing the concept worked closely with the city environmental authorities throughout. All remediation phases were documented in detail and checked and approved by experts.

50,000 cubic metres

were added to the site together with earth and top soils

A further

92,000 cubic metres

of excavated contaminated material were sent for professional recycling so that it could be re-used elsewhere



Meticulous planning was needed to ensure the materials were separated according to type. Now the work has been completed, the site is being transformed into a top quality residential area

Ideal waste segregation

Remediation work to clean up the soil officially began in the autumn of 2013. One of the major challenges facing the REMEX ProTerra specialists was the five-metre thick layers of deposited waste that had gradually built up there over the decades. Chemical and physical analyses had to be carried out on each individual layer to determine their exact contents so they could – as far as possible – be separated into different material streams. Non-mineral matter was sifted out and construction waste broken up on site so that it could be used to create a base course. A total of 50,000m³ were added to the site together with earth and top soils. A further 92,000m³ of excavated contaminated material were sent for professional recycling so that it could be re-used elsewhere. Only a very small amount was sent to landfill.

A lovely residential area along the river

Once the remediation work was successfully completed, the site was transformed into a top quality residential area. Plans are for 220 homes to be built on the grounds. The first people were able to move into their new homes in 2014. The project, which includes a variety of residential properties as well as public parks and wheelchair accessible paths to the river, is expected to have been completed by 2018. Thanks to this work, there is now nothing to stop this attractive area on the banks of the Ruhr River being used to the full.

“This Kettwig project is a perfect example of how grey can be transformed into green.”

Reinhard Paß, retired Mayor of the City of Essen

A business game

A COMMENTARY BY HERWART WILMS

Germany 2020: it all began with the pharmacies. An ever increasing number were being closed down in the sparsely populated regions in the east of Germany as so many people had moved away and the demand for medicines simply wasn't high enough. To begin with, mobile pharmacies were deployed but after a while even these were no longer profitable. When they were taken off the roads, the first voices could be heard talking about the failure of the market economy. The decision was made within no time at all: as pharmacies provide a public service, they should be nationalised so that everyone has access to them wherever they live.

The 'Grand Coalition' did not have to brace themselves against much opposition as the pharmacists made up only a small percentage of the voters in Germany. The heads of the two main coalition parties also thought it made good electoral sense not to let the more left-wing parties get the better of them. And so, after just a few reports on TV showing the protesters brandishing slogans such as "Stop the rot!" or "What's next? The hospitals?", the pharmacists were soon forgotten.

The rest fell – almost automatically – into place as the thought had already been put into words: as pharmacies provide a primary medical service, then, so too, do the hospitals and doctors' surgeries. This ignited a huge public debate accompanied by a large number of expert reports and opinions. In keeping with the spirit of the time, the reports calling for the government to expand its provision of public services found their way to the top of the pile.

This spirit spread like wildfire and soon affected the markets that had always been associated with nationalisation in the past. First the waste management sector was nationalised – something that had already been seen in Hungary – and then garden and landscaping firms and road traffic safety businesses and, of course, all water supply networks. All private springs – from Gerolstein, to Apollinaris, to Bad Liebenwerda – were nationalised because it is the responsibility of the state to provide its population with vital services, especially water! The sales of such products should not be dictated by private sector companies and their profit-driven operations.

When the next expert report suggested that providing people with food and warm clothing was a vital service that should also be managed by local authorities, food retailers tried desperately to explain how high their VAT and local business tax bills were – money that helped maintain the



+ 25%

increase in the number of municipal companies between 2000 and 2012 (total amount: 13,453). The German Taxpayers Association has discovered that the greatest share of local authority debt is to be found in these municipal companies





€140 billion

total debt of German councils and local authority associations at the end of 2014

(source: Federal Office for National Statistics)



€6.169 billion

losses amassed – within a twelve-month period – by local authorities in the Rhine/Ruhr region and the State of Lower Saxony as a result of speculating in stocks and shares (RWE AG & VW AG)

prosperity of our society. Again there was a major debate and the Minister for Trade and Industry and Vice Chancellor made it very clear that it would be hugely advantageous to nationalise the food retail market as the products could be sold more cheaply as state-owned businesses were exempt from paying VAT. He owed it to the people, to his party and to himself to take this step. His boss did not disagree.

It was, therefore, only a matter of time before old files were dusted down and opened up: it had been a mistake to privatise telecommunications as had been the liberalisation of the rail network. This error should be rectified immediately. And so what followed was the nationalisation of the telecommunications industry, postal services and the railways and – a logical step – the whole of the logistics sector as this business was responsible for supplying the population with the basic items they needed: so it's a vital service, so nationalise it!

It was the Finance Minister who worked out what this cost the state and who not only complained that the lack of competition was leading to a loss in quality but also that tax revenue had dried up. There was no money to pay civil servant salaries or state pensions. His colleagues in the German states had capitulated long ago and declared themselves bankrupt.

When the Finance Minister handed in his resignation, a government spokesperson said: "Nobody had set out with the intention of creating a socialist state."



Herwart Wilms,
REMONDIS Managing Director



A business model with a promising future

PUBLIC PRIVATE PARTNERSHIPS CREATE NEW OPPORTUNITIES

Local authority budgets are being stretched to the limit. More and more towns and districts are having to cope with the task of mastering growing challenges whilst simultaneously cutting their costs. Supply and waste management services are also being affected by this pressure on the public purse. The latest motto: to provide top quality services without increasing charges.

PPPs help stabilise local charges without cutting down on public services

The financial situation of German local authorities worsened last year, even though many towns and districts had been sticking to a strict policy of cutbacks. According to the 'DStGB' (German Association of City and District Authorities), total debt increased by a further 2.2 billion euros compared to 2013¹. One tried and tested method could help relieve their problem of having to provide more services with diminishing funds: public private partnerships (PPP), i.e. a business collaboration between the public and private sectors.

PPPs have been around for more than 100 years and have proven many times over that they can be a success. They were able to demonstrate their strengths back when industrialisation began and local authorities had to set up an extensive infrastructure in their region within as short a time as possible. The advantages offered by PPPs at that time remain the same today. PPPs are still an ideal way of creating advantages for all those involved – for the councils, for their employees and for their local inhabitants. This can also be seen by the approx. 100 PPP companies, in which REMONDIS owns a share.

A PPP with REMONDIS can make the very most of the whole of the group's network of over 250 treatment and recycling facilities

additional business and sales opportunities which means greater profits that directly benefit the public purse.

Innovations & investments

Being a shareholder in the business, the private sector partner invests their own capital in the PPP. This is a really important aspect for local authorities as they would find it very difficult to find the money needed for the necessary investments by themselves. This opens up new avenues for them, from which they clearly benefit. And they have a sound financial basis, as they are able to rely on the financial strength of REMONDIS as their partner.

In addition, REMONDIS can contribute to the PPP with their extensive financial expertise that can procure and release additional funds – especially for large-scale projects such as building a plant or modernising a region's infrastructure. On top of this, the company is well-known as being one of the pioneers in its field and all its innovations and technological know-how can be put to very good use.

Expertise & resources

The company's years of experience and wide range of expertise help to improve operations. As far as the everyday work is concerned, local authorities can use the comprehensive know-how and skills of one of the leading water and recycling companies. Moreover, they have access to the group's logistics and plant network. A PPP with REMONDIS, therefore, can make the very most of the whole of the group's network of over 250 treatment and recycling facilities.

By the way, the official tasks, rights and fundamental responsibilities of local authorities are not affected by a PPP. This is all stipulated in detail in the various types of contract which are adjusted to meet the exact needs of the local authority and the precise tasks of the PPP. Even the question of the workforce is answered: REMONDIS guarantees to take on all the employees.

¹ 'DStGB' [German Association of City and District Authorities], 'Gemeindefinanzen – Situation der Kommunen verschärft sich weiter' [Local Government Finances – The situation faced by local governments continues to worsen], March 2015

PPPs have been around for more than

100 years

and have proven many times over that they can be a success

Twice the expertise and more scope for investments: PPPs create a host of advantages – not only cost savings

Cost effective & efficient

One of the most important advantages of a PPP is that it creates diverse financial benefits for local authorities – for example at the beginning of the cooperation, when the private sector partner purchases a share in the municipal company and this money flows into the municipal coffers. This is then normally followed by a period of reorganisation when more efficient and more cost-effective structures are introduced into the business – often thanks to models developed by the privately owned companies over the years in response to the competition they have had to face. These measures enable the PPP to operate more efficiently and to make savings – effectively cutting costs and improving the quality of the services at the same time. Sometimes, PPPs can collaborate together to create

Sewer renovation work in the city centre

LWG DEPLOYS UNUSUAL TECHNOLOGY AND STATE-OF-THE-ART TECHNIQUES

The City of Cottbus in the German state of Brandenburg is preparing itself for the future: at the beginning of April, work began on a new central sewer right in the heart of the city. This is one of the final stages of the project to renovate the city's main sewer system which is over 115 years old and transports both rainwater and the wastewater generated by the approx. 80,000 city residents.

"It is a highly complex project – and is right in the heart of the city," commented Marten Eger, managing director responsible for technology at LWG Lausitzer Wasser GmbH & Co. KG. REMONDIS Aqua's Cottbus PPP company is financing and managing the work. They have drawn up a complex concept to realise this project, which aims to minimise disruption both for the local residents and for the public transport services.

Similar to tunnel construction work

For the most part, this sophisticated work involves so-called trenchless technology. Similar to tunnel construction work, a boring head tunnels its way through the earth and places the sewer pipes in the ground – with a pressure of up to 300 tonnes. Thanks to this method, only a few shafts need to be dug, namely at the beginning and at the end. At the same time there is no need to dig 7-metre trenches. The new sewer pipes have been constructed so they can be

Gigantic technology: the boring head deployed for laying the pipes is similar to systems used to build tunnels. It weighs 18 tonnes, is 6 metres long and has an outer diameter of approx. 1.80 metres





The section of the main sewer system that is being renovated in Cottbus lies 7 metres below the ground



The newly laid pipes are truly impressive with an outer diameter of 1.72 metres

laid using this special system. They have an outer diameter of 1.72 metres and walls around 7 centimetres thick to be able to withstand the pressure of this process. One of the two starting shafts had to be lined with underwater concrete to prevent groundwater seeping in. The indentations in the steel girders were first cleaned by industrial divers before the work began to ensure that the underwater concrete was flush.

Reacting flexibly to unexpected events

The construction work is due to have been completed by the end of December 2015 – an ambitious schedule as such a heavily built up area that has been used for centuries is bound to throw up a few surprises. Quick and flexible reactions have already been called for to adjust the plan to cope with some unexpected situations. The boring and excavation work has, for example, revealed a number of archaeological findings, including pottery fragments and coins as well as the foundations of an old city gateway.

Detailed information for the local residents

As the people living in the City of Cottbus are very interested in this construction project, a number of recesses with windows have been built into the 800-metre fence running

CREATING THE FUTURE TOGETHER

LWG Lausitzer Wasser GmbH & Co. KG is one of the largest and most well-known water management companies in the German state of Brandenburg. With its workforce of around 170 employees, it supplies drinking water to approx. 130,000 local residents. Moreover, the company is in charge of managing the wastewater generated in Cottbus and eight neighbouring districts. For many years now, REMONDIS Group companies and PPP firms have been providing local authorities with reliable water and wastewater services. The renovation of the sewer in the centre of Cottbus is the biggest project LWG is due to carry out this year.

along the site. They can use these to observe the renovation work and follow the progress being made. LWG has also hung some banners along the fence explaining the different stages of the project. They also held an open day in August and showed those interested around the site and answered any questions the visitors had about the work.

Fence adorned with artwork

“We have added children’s drawings to the fence to make it more attractive,” explained Marten Eger. The pictures were submitted as part of a competition initiated by LWG and all have to do with the subject of water. More than 120 drawings were handed in to the company.

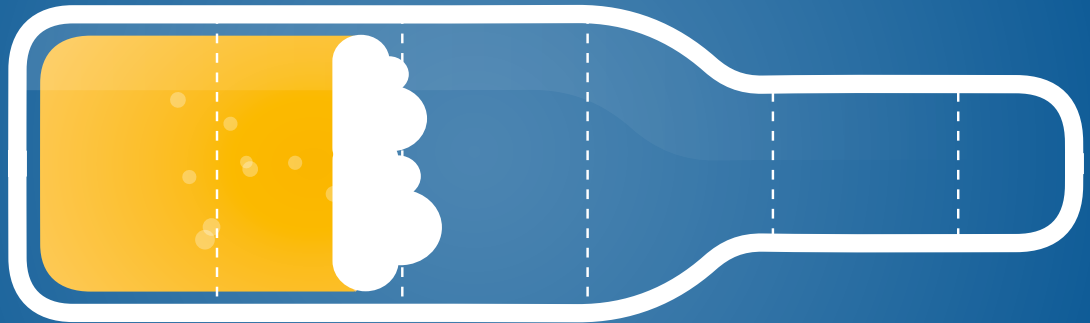
Precision work is called for when laying the sewer – each pipe must be placed in the correct position at the exact right time



A maximum

3,000 litres

of wastewater can flow through the new sewer every second



REcharging ... 40 %

An innovative concept

AWARD PRESENTED TO OETTINGER BREWERY FOR RECOVERING ENERGY FROM ITS WASTEWATER

Oettinger has become one of the largest breweries in Germany thanks to its successful concept of offering "top quality at attractive prices" and has received numerous prizes over the years. Last year, it came in second place for the 2014 Energy Efficiency Award: this award was presented to the company's site in Mönchengladbach in recognition of its commitment to environmental protection and energy management. One of the central features here was the wastewater treatment system built and managed by REMONDIS Aqua.



OETTINGER: FROM A VILLAGE BREWERY TO AN INTERNATIONAL GROUP

This family-run business was founded in the Bavarian town of Oettingen in 1731. Today, the Oettinger Group has a workforce of around 1,100 employees and is one of the largest breweries in Germany. Each year, the group's four production sites fill approx. two billion bottles and cans with beer, beer-mix drinks and soft drinks which are then sold all around the world.

Almost four years ago, REMONDIS Aqua was commissioned by Oettinger to optimise its water management system at its brewery in Mönchengladbach. This branch, situated in the Lower Rhine region, is Oettinger's second-largest production site in Germany. It is not only home to the company's engineering and technology centre, purchasing department and central national and international quality assurance but also to control and logistics and technical support for licensing abroad.

The pioneering RE²ENERGY® process

The wastewater treatment system built and operated by REMONDIS Aqua in Mönchengladbach has been used to produce energy since 2013. It is run using REMONDIS Aqua's state-of-the-art RE²ENERGY® process. This not only ensures that the water is treated and cleaned to a very high standard but also recycles the contents in the wastewater to produce energy.

The biogas produced by the unit is then used in the brewery's boiler house to heat up the process water. This considerably reduces Oettinger's consumption of natural gas. At the same time, carbon emissions can be slashed by up to 2.3 million kilograms each year if the RE²ENERGY® facility is used to full capacity – the equivalent of the carbon emissions of around twelve million car miles a year.

Sustainability an integral part of the company's philosophy

"The innovative project for recovering energy from wastewater is exemplary, as it stands out from the more usual energy-efficiency measures," was the statement given by the panel of judges when presenting the company with the 2014 Energy Efficiency Award. Franz Herrmann, energy manager at the brewery, also believes that the prize-winning wastewater treatment facility is a significant innovation: "The system was introduced in Mönchengladbach as a pilot project and will serve as a model for the other breweries in the Oettinger Group."

Oettinger places great importance on deploying state-of-the-art technology, as it helps to make processes more efficient and resource-friendly. Having undergone a number of modernisation and expansion phases over the last few years, the Mönchengladbach site is now considered to be one of the most modern production sites in Europe.

Further awards for the brewery

Since then, Oettinger has received a number of other awards for the excellent set-up and performance of its breweries. In the spring, for example, Johannes Rimmel, Minister for Agriculture for the state of North Rhine-Westphalia (NRW), presented the company with the 2014 NRW State Prize for Food. This was followed in the middle of the year by the Federal Award of Honour presented by the Federal Ministry for Food and Agriculture. This is the highest honour that a brewery can be awarded for its quality services.

REMONDIS Aqua is the leading supplier of innovative industrial water management contracting models – and not only in the drinks and food industry



Carbon emissions can be cut by up to

2.3m kilograms

if the RE²ENERGY® facility is used to full capacity

The philosopher's stone

REMONDIS AQUA RECOVERS PHOSPHORIC ACID FROM SEWAGE SLUDGE ASH

When, in 1669, the German pharmacist and alchemist Henning Brand carried out an experiment on urine in an attempt to find the philosopher's stone, he discovered a substance that glowed in the dark. He decided to call this powder 'phosphorus' from the Greek, meaning the 'bringer of light'. Brand had unknowingly discovered one of the fundamental elements vital to all living organisms. Phosphorus compounds are a key part of our DNA, which carries our genetic code. Moreover, phosphorus is essential for both growth and energy metabolism. In other words: no phosphorus – no life. REMONDIS Aqua has joined forces with Hamburg Wasser and built a pilot facility that is able to recover this precious substance from sewage sludge ash.



(from left to right) Michael Beckereit, managing director of HAMBURG WASSER, Jens Kerstan, Senator for the Environment Hamburg, and Dr Martin Lebek, project manager and managing director of REMONDIS Aqua, show the materials produced by recycling the phosphoric acid during the official opening of the pilot plant

Phosphorus is vital to all living organisms – and natural reserves of this substance are gradually being depleted

The bad news first: this substance is gradually running out. Whilst around 0.09 % of the Earth's crust is made up of phosphorus compounds, it is only technically and/or economically practicable to mine just a fraction of this. Phosphorus occurs almost exclusively as a compound in nature, as phosphate or phosphoric acid, and can also, for example, be found in sewage sludge. For many years, therefore, farmers have been putting sewage sludge on their fields to improve their crops. The German government, however, wishes to put a stop to this practice as, unfortunately, the sewage sludge not only releases this valuable substance into the ground but many pollutants, too, such as heavy metals. The demand for high quality fertiliser is growing but phosphoric acid is needed to produce phosphate fertiliser and high quality animal feed – two products that are vital for the agricultural industry.

For a long time now, scientists across the world have been looking to find cost-effective ways of recycling phosphorus – an essential nutrient for all living organisms – as reserves of this natural resource are gradually being used up. The demand for phosphoric acid in Europe alone lies at over 1 million tonnes a year.

Now for the good news: REMONDIS Aqua has developed a novel process that can provide established supply chains with phosphorus as a high quality secondary raw material – closing the material life cycle of this vital substance. It does this by recovering a pure form of phosphoric acid from the ash of incinerated sewage sludge.

This new process to recover phosphates was developed by chemists in the laboratory and now, thanks to the strong cooperation work between HamburgWasser and REMONDIS, it is to be tested and optimised under ideal conditions at a pilot facility set up close to VERA Klärschlammverbrennung. VERA is a public private partnership owned by HamburgWasser (60 %) and REMONDIS (40 %). For many years now, the two companies have been working together successfully in the area of sewage sludge incineration. The sewage sludge from Hamburg and neighbouring sewage treatment plants is thermally treated and used to generate energy. The leftover sewage sludge ash is now to be used as a valuable raw material for recovering phosphorus.

Tests will now be run over the coming months to work out the best configuration for the new facility. "If everything goes to plan, then REMONDIS and Hamburg Wasser should



Hamburg's state-of-the-art sewage treatment plant and its new phosphorus recycling pilot plant are located right in the centre of Hamburg Harbour

be able to build a large-scale plant and recover several thousand tonnes of phosphoric acid every year," commented Dr Martin Lebek during the official opening of the pilot facility in July 2015. Hamburg's Senator for the Environment, Jens Kerstan, was really pleased to see that cost-effectiveness and environmental protection really can go hand in hand: "It's great to see this process being tested out in Hamburg. Phosphorus recycling helps protect the environment – and makes good business sense as well." The RePacid® phosphoric acid recovered during this process is free of heavy metals making it a perfect source material for producing fertiliser and animal feed. However,

this method not only generates phosphoric acid from the ash. It also creates gypsum for the building supplies trade and iron and aluminium salts which can be returned to sewage treatment plants to be used as a precipitating agent to treat wastewater and eliminate phosphorus. REMONDIS' TetraPhos® process is, therefore, not only extremely eco-friendly, efficient and cost effective, it also helps to conserve our planet's natural resources. It closes material life cycles, protects our fields, rivers and lakes and helps to reduce Europe's long-term dependency on phosphate imports.

Two birds with one stone:
perfect recycling and clean
fertiliser

BACKGROUND INFORMATION



Josef Lehmkuhl

Josef Lehmkuhl was the brains behind this novel process. Josef Lehmkuhl worked as Head of Research & Development at the REMONDIS Lippe Plant and continued to work in an advisory capacity after he retired from full-time work. During this time he made a name for himself among his peers, especially in the areas of aluminium chemistry and phosphorus recycling. It was primarily thanks to him and his fascination for research that this idea made it off the drawing board and has been turned into a cost-effective process with a promising future. Unfortunately, Josef Lehmkuhl passed away unexpectedly on 04 April 2015. The plant, which will show that phosphoric acid can be recovered cost effectively from sewage sludge ash on an industrial scale, is now being managed by his colleague and co-researcher, Dr Martin Lebek from REMONDIS Aqua.

Taxpayers Association critical of municipal business activities

In its latest annual report, the German Taxpayers Association (BdStz) criticises the uncontrolled growth of municipal business activities. There are a small number of councils that run sound businesses, have very little debt and focus their operations on the essentials. The majority of them, however, operate permanently in the red and simply move from one budget crisis to the next, year in year out. This, the report says, has a considerable impact on the difficult financial situation councils find themselves in today. At the end of 2013, councils across Germany had a total debt of just under 280 billion euros. Only 45 percent of this amount – 126 billion euros – was caused by budgets destined for key services. The majority of this debt is, therefore, to be found elsewhere.

The BdStz finds fault with the numerous explanations that are being cited to justify municipal business activities. One argument often heard is that they can offer services at lower prices – but local residents should not allow themselves to be deceived. Municipal services are often subsidised with public funds. Residents are unable to track how much and where taxpayers' money goes. The current efforts being made to remunicipalise services generally ignore the fact that the private sector already has the experience and know-how needed for the work. The public sector must first acquire this essential knowledge as many councils do not have the expertise required. Moreover, it is easy to underestimate the complexity of the tasks on hand and the amount of technology and the size of the organisation needed. In addition, the local laws in some German states do not permit city and district authorities to do business outside their region. At the end of the day, it is the taxpayers who must bear the risk.



Exhibition raises awareness of plastic rubbish in our oceans

REMONDIS' associated company, Müllverbrennungsanlage Kiel (MVK), the Geomar Helmholtz Centre for Ocean Research Kiel and the Multimar Wattforum Centre in Tönning recently held an exhibition in Kiel Town Hall to make people more aware about the problem of plastic debris floating on and in our seas. Visitors to the event were able to take part in experiments and get an idea of just how extensive microplastic pollution already is in our oceans. A large beacon of waste made from wood and plastic collected from the sea really brought this message home. The exhibition also showed what alternatives were available, emphasising that there really was no need to continue this habit of littering our oceans. The systematic

collection, sorting and recycling of waste all prevent these materials from ending up in our oceans – and can also be used to generate energy and heat if the waste is thermally treated. Besides the two options of avoiding waste in the first place or sending it for materials recycling, MVK managing director Frank Ehlers made it clear that the thermal treatment of waste was another effective way of preventing our seas from being further polluted by plastic debris. He explained that 12,000 tonnes of plastic waste were thermally treated at the plant in Kiel every year – with an efficiency level of 70 percent. The majority of these materials are made up of sorting residue that cannot be sent for materials recycling as well as complex composite substances.

Robot team win with REMONDIS' support

In response to a project sponsored by the District of Lünen's business development arm, WFG, and as part of the company's own training initiative, REMONDIS Production GmbH has been supporting a team of pupils from the Geschwister Scholl secondary school in Lünen who have been busying themselves with robotic technology. The team supported by REMONDIS has already won a number of national competitions and has now qualified to take part in the Robot Olympiad in Qatar. Their challenge is to build and program a robot that can help people search for natural resources in potentially dangerous environments. The robot developed by the pupils looks very similar to the one currently being used on Mars to search for signs of life and analyse rock samples. By supporting this team, REMONDIS wishes to stress the importance of training, research and development work as well as to encourage young people to apply to do an apprenticeship at REMONDIS.



Pupils from the Geschwister Scholl School in Lünen and their teachers with their winner's certificate. The picture above shows the robot they built. Any similarities to the well-known Mars rovers are pure chance

Award presented to 'Sales Employee of the Year' 2014

In May this year, the 'Sales Employee of the Year Award' for 2014 was presented to the worthy winner during a boat trip on the MS Möwe on the Rhine in the presence of REMONDIS board member Thomas Conzendorf. Once again the jury had a difficult task picking the winner as all of the names put forward for the award had shown huge commitment and achieved an excellent performance. Christel Fortagne from the Rhineland Region was named Key Account Manager of the Year for 2014. Ms Fortagne has contributed greatly to the success of REMONDIS Olpe GmbH helping to make the company the market leader in South Westphalia. The level of her commitment to the firm and her achievements over the last eight years have been exemplary. By introducing optimisation measures at her customers' and discovering potentials for cross selling, she has succeeded in building up a loyal customer base.

Sales Manager of the Year for 2014 went to Björn Walde from the Rosenheim branch (South Region) who has been particularly successful at acquiring new customers. When talking to potential customers, Björn Walde focuses on the quality and the benefits of the services the company has to offer. He succeeds in developing strong business relations with his customers who value his expertise. The

special award for "Long-standing Successful Sales" was presented to Thorsten Hoof from the North Region and Thomas Ritter, East Region. Both gentlemen have a wealth of specialist knowledge and stand out thanks to their high levels of commitment and their long-standing success. They use their network of contacts to optimise processes at their customers' and to cross sell products and services. Their extensive loyal customer base shows just how successful they are. Many congratulations to all the prize winners and many thanks to all our other colleagues who achieve such a great performance for REMONDIS' customers every single day.



Board member Thomas Conzendorf (back row, right) presented the REMONDIS 'Sales Employees of Year 2014' with their awards during a boat trip on the MS Möwe. (from left to right) Stephan Fimpeler, Marvin Roggenkamp, Björn Walde, Christel Fortagne, Thomas Ritter, Thorsten Hoof, Roland Lenders, Martina Zepp, Dennis Stein and Christian Decker

Knuckling down together with no barriers

INCLUSION AT REMONDIS – JOBS FOR PEOPLE WITH DISABILITIES

REMONDIS®

WORKING FOR THE FUTURE

Christian Sternberg has made it. He now has a regular full-time job at REMONDIS Olpe thanks to the support he has received from the Werthmann Workshop, an organisation that helps integrate people with a disability into the world of work. Unfortunately, this is not something that people with a disability can take for granted. Christian Sternberg's tireless dedication and hard work, however, have made it very clear that there is no great difference between him and his colleagues when they get to work to help protect the environment. This is a story of successful inclusion at REMONDIS.



Christian Sternberg next to his truck, a special vehicle for collecting municipal waste. He was able to fulfil his dream of having a full-time job thanks to REMONDIS' inclusion initiative

The workshop – named after Lorenz Werthmann, the founder of the Caritas charity – helps people with a disability to adapt to working life so that they find their place in society. Specially trained members of staff are currently helping over 580 people with a mental or physical disability or with multiple disabilities living in Attendorn, Lennestadt, Olpe and Welschen Ennest. The workshop's 'eXtern' department collaborates with businesses and institutions based in the district of Olpe to help people with a disability find a job.

Christian Sternberg was first taken on as an employee at the Werthmann Workshop in September 2005 helping out in a bicycle business. In November 2011, he then moved to REMONDIS' branch in Lennestadt where he helped in the

company's waste management operations. REMONDIS has been supporting inclusion in the workplace for many years now and assisted Christian's move into the general job market in cooperation with an integration assistant from the 'eXtern' department and the integration office responsible for the districts of Siegen-Wittgenstein and Olpe. His tasks include helping to collect household waste and operating the controls on the collection vehicles. It soon became very clear that Christian Sternberg not only has the same physical strength as his colleagues but is also very flexible. Collection rounds sometimes begin at four in the morning on a hot summer day. Not a problem for Christian.

He is also popular among his colleagues. A few small hurdles about how to treat each other were able to be cleared up quickly at the start. Thanks to the support provided by his colleagues, the help of the integration assistant and Christian Sternberg's own high levels of motivation, he has successfully adapted to the daily routines at REMONDIS. As a result, the external job as part of the workshop scheme has now been transformed into a regular job at REMONDIS. "I've always wanted to have a regular job and pay my national insurance contributions," commented Christian Sternberg, proud of his achievement. Jost Nöller, a member of the senior management team at REMONDIS Olpe who has himself been in a wheelchair since a young age, underlined the commitment of the company in this area: "I know from experience that it is not so easy to find work in the normal job market when you have a disability. I am, therefore, really pleased that it has worked out so well with Christian Sternberg here."

> Impressions



◀ (from left to right) Ludger Rethmann, Board Chairman of REMONDIS, MdB Sylvia Jörrißen, Herwart Wilms, REMONDIS Managing Director, MdB Ingbert Liebing, Chairman of the CDU Party for the State of Schleswig-Holstein, Erwin Braatz, REMONDIS Managing Director, and MdL (Schleswig-Holstein) Heinz Maurus during a visit to the Lippe Plant



▶ Minister President of the State of Brandenburg, Dietmar Woidke (left), and Norbert Rethmann, Honorary Chairman of the supervisory board of the RETHMANN Group, during a tour of BUCHEN's branch in Schwedt

▲ Norbert Rethmann, Honorary Chairman of the supervisory board of the RETHMANN Group, and Franz-Josef Englisch, Managing Director of BUCHEN, with a number of apprentices during their visit to the training workshop in Schwedt



▶ Physicist and TV presenter, Ranga Yogeshwar, at the REMONDIS Forum in Hagen on 10 September

▶ (from left to right) Herwart Wilms, REMONDIS Managing Director, Dr Heinrich Dornbusch, CEO of KlimaExpo.NRW, Dr Gabriele Becker, Divisional Manager at INFA GmbH, Jessica Bobinis, Project Manager at KlimaExpo.NRW, Dr Jochen Hoffmeister, Director of Economics, Energy and Infrastructure at Prognos AG and Nadja Schütz, Project Manager for Economics, Energy and Infrastructure at Prognos AG, during a tour of the WEEE dismantling centre at the Lippe Plant in Lünen



Poor in resources, rich in options

Being an industrial nation with few natural resources of its own, Germany relies on systematic recycling processes to supply it with the materials it needs. Recycled metals – such as aluminium, tinplate, copper and other precious metals – are of the same high quality as those produced from primary raw materials. Which is why REMONDIS has developed highly efficient systems and processes enabling it to supply German industrial businesses with large volumes of essential raw materials, e.g. around 7.6m tonnes of steel and metal, 3m tonnes of building aggregate and 1.8m tonnes of paper every year.