

AN END TO OUR THROWAWAY SOCIETY – RECYCLING PREVENTS RAW MATERIAL SHORTAGES



Latest news

The world needs more recycling

Recycling

From biowaste to eco-friendly electricity

Water

Calling in the divers – industrial divers
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streams moving

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THE WORLD NEEDS MORE RECYCLING

Seldom do politicians, environmentalists and industrial businesses agree but they are of one voice when it comes to tackling the greatest challenges of our time: preventing climate change, conserving natural resources, setting up sustainable production processes, securing raw materials and having access to energy that is both clean and affordable. Conserving our planet's natural resources and sustainable business operations need not be at odds with one another as can be clearly seen at REMONDIS. Over the last five decades, this family-run company has played an important role in increasing materials recycling in Germany. **Page 4**



THE "ONE-STOP" SERVICE PROVIDER

Since 1996, an industrial estate – run under the red REMONDIS flag – has been set up on the Lahnstraße in the Berlin Neukölln district and has become an important part of the economy in and around Berlin. Being both a service provider and employer, it is no longer possible to imagine the city without REMONDIS. A total of 17 businesses provide their different ranges of sustainable services from REMONDIS' site in the capital. **Page 10**



INSULATION AS A SOURCE OF RAW MATERIALS

When property owners wish to reduce their energy costs, their first choice tends to be exterior wall insulation systems. Around 50 percent of all possible savings can be achieved simply by using this type of insulation. Who is already thinking about how to recycle this material? REMONDIS of course! **Page 16**

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EDITORIAL

Dear Readers!

Statistically speaking, humanity had used up the natural resources of a whole year by 20 August. According to the calculations of an independent organisation of international scientists, the so-called "Global Footprint Network", our planet has – from that date onwards – no longer been able to compensate for our escalating demand for material and energy and replenish its resources through natural regeneration. We are consuming the natural reserves of future generations acting as if we have two, three or even more planets to fall back on in an emergency. Whilst this so-called Earth Overshoot Day has been getting closer and closer to the middle of the year since the beginning of the 80s, the world's population has continued to grow exponentially. At the same time, the demand for food and prosperity has not only been increasing here in Germany but also in the heavily populated threshold countries. Consumption of important resources has already exceeded the amount our planet is able to supply naturally. New sources of raw materials are nowhere to be seen. Or maybe we are not looking in the right places.

There is a good solution to this problem: to systematically recycle all types of waste. Humanity can no longer afford the dubious luxury of sending the majority of their waste unused to landfill or incineration plants. Most countries, however, still lack the capacities and know-how to recognise and use waste for what it really is and what we have known it to be for many years: an important source of raw materials with a great potential for sustainability. Conserving our planet's natural resources and sustainable business operations need not be at odds with one another as can be clearly seen at REMONDIS. Being a leading recycling and water services company, REMONDIS has played an important role in increasing materials recycling in Germany over



Ludger Rethmann,
Board Chairman

the last five decades. Materials recycling is, by the way, one of the key requirements of the European Waste Framework Directive. Only 16 percent of the around 300 million tonnes of waste currently being generated in Germany is still being sent to landfill. Waste disposal is a thing of the past. Recycling is the only practicable way to create a sustainable future. Today, a good 14 percent of the German industrial sector's raw material requirements is already being covered by secondary material sources. REMONDIS is calling for an end to our throwaway society so that this figure can continue to rise.

To be able to achieve these goals, however, not just technical know-how and adequate investments are needed – investments that are primarily carried out by the private sector as local authorities often lack the necessary funds. What is also required is the right level of political will. A lot of catching-up needs to be done in this area whether it has to do with the wording of the upcoming law on recyclable waste regarding ambitious target rates and quality of service or with the enforcement of the regulations. When it comes to German recycling legislation, little progress has been made over the last four years. With the general election having taken place just recently, a new legislative period is about to begin. The long overdue regulations regarding the concrete organisation of the secondary raw material and recycling sectors will once again be on the to-do list for the new MPs. Germany has been acting as a role model in the area of recycling. It should not put this at risk by causing this sector to stagnate or, even worse, to take a step backwards.

I hope you enjoy reading this edition
of the REMONDIS aktuell!

A handwritten signature in black ink that reads "Ludger Rethmann". The script is cursive and elegant, with a prominent 'L' and 'R'.

Yours Ludger Rethmann

It was once again that time of year: on 20 August, the "Global Footprint Network", a non-governmental organisation of international scientists dedicated to creating a sustainable future, announced the world had reached this year's Earth Overshoot Day. Based on statistical calculations, this is the day when humanity has used up the natural resources of a whole year. From this day onwards to the end of the year in question, therefore, the world is effectively operating on credit as our planet is no longer able to compensate for this escalating demand and replenish its resources. We are helping ourselves to more than we have and are sawing off the branch that we are sitting on and will continue to have to sit on. Earth Overshoot Day is the only scientific measuring instrument that we have that shows the gap between humanity's demand for resources and what the Earth can actually produce. Conserving our planet's natural resources and sustainable business operations, however, need not be at odds with one another as can be clearly seen at REMONDIS. Over the last five decades, this family-run company has played an important role in increasing materials recycling in Germany. Of the around 300 million tonnes of waste currently being generated in Germany, only 16 percent is still being sent to landfill. 84 percent undergoes materials recycling or is used to generate energy. Whilst investments amounting to billions of euros have been necessary to achieve this, money alone cannot solve the problem. Politicians must also create incentives by passing sensible laws. The greatest incentive of all, however, is the growing scarcity of natural resources and the need to take action to prevent climate change. The following examples clearly show just how important materials recycling is:

By collecting and processing two million tonnes of waste paper, REMONDIS has reduced deforestation and prevented 7.3 million tonnes of forest from having to be cut down. According to a study drawn up by the Johann Heinrich von Thünen Institute on behalf of the 'Stiftung Unternehmen Wald', a German non-profit foundation dedicated to protecting forests, around 4.4 billion tonnes of CO₂ are absorbed by German forests. Or to put it more succinctly: one hectare of trees, no matter what age, absorbs approx 13 tonnes of CO₂ each year. Just by recycling waste paper, card and cardboard, therefore, REMONDIS makes an important contribu-



tion towards preventing climate change – and this is just a small part of its business operations.

100 percent recycling to create the perfect loop

Whilst paper recycling primarily helps to prevent climate change, other material fractions are important for conserving our planet's natural resources and counteracting the scarcity of raw materials. According to statistics published by the Federal Environmental Agency (UBA), 14 percent of the German industrial sector's raw material requirements is covered by secondary material sources – and this figure continues to rise. Export is of particular importance for the economy of Germany, Europe's most populous country, and with mechanical engineering playing a major role here, its demand for all types of metal is high. REMONDIS processes a good 7.5 million tonnes of steel scrap and other kinds of metal scrap – the largest material stream recycled by the group's companies. In addition to this, REMONDIS handles 150,000 tonnes of waste electrical and electronic equipment (WEEE). How does this help the environment and the climate? Thanks to REMONDIS' metal recycling activities, less ore needs to be mined. Put in concrete terms: demand for iron and copper ore has been reduced by over 15 million tonnes due to the total amount of metal recycled by the company. This not only helps to protect our landscape – up to 40 times more energy is needed to refine bauxite into aluminium or copper ore into pure copper than is needed to recover them from scrap metal or WEEE. Metal recycling creates a perfect synergy preventing climate change, conserving natural resources and securing supplies of raw materials. ►

Recycling is the key to a sustainable future



► The scales are perfectly balanced when it comes to REMONDIS’ mineral recycling activities: 2.5 million tonnes of recycled building materials substitute the exact same amount of natural products and so take the pressure off the environment, the climate and the construction sector’s purse. One particularly smart activity is the recycling of gypsum from flue gas desulphurisation (FGD) systems. This waste gypsum is produced as a result of generating energy from fossil fuel and is identical to natural gypsum. Each year, REMONDIS processes 300,000 tonnes of this waste product at its plant in Lünen alone. 300,000 tonnes that would otherwise be released into the atmosphere as damaging flue gas emissions. REMONDIS has, therefore, helped to ensure that acid rain has become a thing of the past.

Metal recycling creates a perfect synergy preventing climate change, conserving natural resources and securing supplies of raw materials.

Recycling FGD gypsum requires low levels of energy and protects our landscape as less natural gypsum needs to be mined. The recycled product can be turned into high quality building material such as plasterboard and screed and is even used for dental plaster.

Competition means higher recycling rates

However, it’s not all sweetness and light in Germany, the ‘world champions’ in recycling. Only just recently, the BDE (Federal Association of the German Waste Management Industry) and other associations criticised the negative effect that the ‘KrWG’ (Recycling Law), which came into force on 01 June 2012, has had on the private recycling and waste management sector. Even though German waste management legislation has acted as a role model across the whole of the world, this latest version has proven to have serious deficiencies not only when it comes to the amount and the quality of recycling but also in the area of fair competition. Over the last four decades, the latter has always been the driving force behind the development

of ever more efficient recycling processes in Germany. The private sector is now in danger of being driven out of the market by local authorities, a move sanctioned by the new law. BDE President Peter Kurth believes this is a threat for Germany’s status as a recycling country: “The latest developments clearly show that the new recycling law has led to a deterioration in recycling activities and a breakdown in competition. Politicians must react to this situation and revise the law so that priority is once again given to its original aims of strengthening recycling and competition. Germany’s position as a recycling nation will be under serious threat if action is not taken to halt the efforts being made by local authorities to further repress commercial waste collection activities which has so far led to a watering down of the services provided to local inhabitants and businesses and, as a result, to a drop in the quality of the collection activities.” If the legislator fails to change its course, specifically in the wording of the subordinate regulations yet to be drawn up, then Germany’s global role model as a sustainable economy is at risk. The fact is that there is a complete lack of ambitious recycling rates in the new recycling law. Moreover, the five-stage waste hierarchy has been watered down, effectively placing recycling at the same level as other methods of recovery. This is not what is needed to protect the environment and the climate nor does it secure supplies of raw materials in Germany, which has so few natural resources of its own.

70 unused kilograms of raw materials – per person

The potential to recover raw materials from the waste generated in Germany has by no means been exhausted. If all the households in the country were to have a recycling bin, then the volumes collected could be increased by a further 7kg per person per year. A further 22kg are lying dormant in the country’s biowaste. And the unused potential of printed products and the – as yet – uncollected volumes of paper, card and cardboard are estimated to be 7kg per inhabitant per year. If collection systems were to be

Carbon emissions could be reduced by at least 2 million tonnes by simply recycling all biowaste

“What is needed to ensure supplies of raw materials remain affordable and our climate and natural resources continue to be protected? The answer is simple: zero waste!”

Ludger Rethmann, REMONDIS Board Chairman

systematically introduced across the whole of the country and all materials recovered, then – assuming politicians were in favour – an additional 70kg per capita per year could be sent for materials recycling. Were biowaste to be used to its full potential – as a raw material for compost and as a source of energy in the form of biogas – then this alone would lead to a positive effect of at least 2 million tonnes of CO₂ equivalents per year. Moreover, several thousand tonnes of the vital raw material phosphate could be recovered from the biowaste. Environmentalists, industry experts and economists all expect the new upcoming law on recyclable waste to stipulate clear efficiency requirements by setting ambitious collection and recycling rates for all material streams and using benchmarks adapted to the special features of the individual regions.

If this is to be accepted by local inhabitants, then local authorities must be able to take regional aspects into account when putting out their tenders in order to guarantee they have the best type and number of collection systems. Local authorities, therefore, are and will remain an important player in the waste management sector by controlling tenders in a fair competitive environment. The 100 public private partnerships involving REMONDIS alone prove that the best solution is for the public and private sectors to work together. At the same time, the product and financing responsibility of manufacturers must remain in place and be extended as they alone can take the first steps to avoid waste and design eco-friendly products.

Humanity must recreate itself and its products

As consumers are not changing their behaviour, our aim must be to introduce sustainable production methods that do not impact on the environment. Besides recovering secondary raw materials, this also means completely redesigning everyday objects such as cars and lights as they are currently difficult to recycle due to the way they have been constructed and their materials put together. Prof.

Michael Braungart and the American architect and designer William McDonough have developed a concept that should take the recycling sector into the future. 'Cradle to Cradle' embraces the fact that nature operates a zero waste system. Products, therefore, should be designed so that they can either be reused completely once they come to the end of their useful life or so that all the materials in the product can be fully recycled. As the biggest market player, REMONDIS is promoting this concept, too, by carrying out targeted



investments. This also includes a new information campaign to encourage the sustainable use of our natural resources. Once again, the private sector is needed here to set up such initiatives and supply the necessary teaching materials and subject-specific courses as schools are often unable to do this themselves due to a lack of funds and teaching staff. The message is clear: it still makes sense to segregate waste and recycling is essential. Environmental issues should be put back onto the school curriculum so that the idea of a recycling economy that addresses both economic and ecological issues and benefits society as a whole is continued in the future, too. For this reason, REMONDIS has made sustainability its core business. If the call for more recycling is heard throughout the world then Earth Overshoot Day may soon be on 31 December again. After all, we only have one planet.

Nature has zero waste.
Humanity should embrace
this idea and make it
their own

New momentum for recycling

DR GÜNTHER BACHMANN, GERMAN COUNCIL FOR SUSTAINABLE DEVELOPMENT

What is worse than fly tipping or the groundwater and environment being polluted with hazardous substances? What is more dangerous to the environment than disorganised landfills and burning tyres? The answer: wasting secondary raw materials.

Dr Günther Bachmann,
Secretary General of the
German Council for
Sustainable Development



The success achieved by environmental policies regarding waste segregation, glass and paper recycling and the recycling of aluminium and copper has been impressive. Despite this fact, however, the recycling sector has a fundamental problem. It no longer embodies state-of-the-art environmental technology nor has it for a long time now. Such technology includes, without doubt, renewable energy technologies, green logistics or e-mobility. The world of recycling bags and the 'green point' recycling logo conjures up an image associated with dogmatism (deposits on drink cans) and political correctness (waste segregation) rather than with progress, innovation, venture capital, global responsibility and 'made in Germany'.

By far the biggest waste fraction of all times – as far as volume and danger to the environment are concerned – is a substance we do not even call waste

This is a serious problem – all the more so as a creative recycling sector theoretically has more tasks ahead of it than successes behind it. The challenges it is facing are not only large and exciting but are downright adventurous if we would only put a name to them. One example, the most important of all: by far the biggest waste fraction of all times – as far as volume and danger to the environment are concerned – is a substance we do not even call waste. By not doing so, we are preventing ourselves from looking at ways to collect, recycle and return it to the economic cycle. The substance in question is carbon dioxide whose greenhouse effect is one of the biggest contributors towards global warming. At the moment, the idea of recycling carbon dioxide is still completely alien and is nowhere to be found in policies aimed at preventing climate change. It remains a part of the vocabulary of the last century: "carbon mitigation" and "low-carbon strategies". This idea does indeed seem to be alien and very unusual. Recycling residual materials generated as a result of the desulphurisation

of so-called flue gases at power plants is simple compared to the technology, social innovation, volumes and way of thinking that would be needed, were we to look for ways and methods, technologies and investment opportunities to collect the "by-product" carbon dioxide and use it for industrial processes or to feed the world rather than letting it escape into the atmosphere as we once threw titanium dioxide into the North Sea. At present, this idea seems a little crazy – the sort of vision where you may be told to visit your therapist. This, however, was the reaction to the ambitious concepts of the 70s when the piles of waste and huge streams of rubbish were still competing with the milk lakes and butter mountains for public attention.

If recycling is to reach the level of public consent that it both needs and deserves, then many things will have to change: in the business world, among politicians, within society, among individuals. It is true that the subject of CO₂ is one for the future. There are, however, more obvious subjects to which this also applies: Germany does in fact have more raw materials than our school books will have us believe. The amount of raw materials that exist as product parts or that are lying safely in the country's landfills is so high that it could cover a large part of the raw material requirements of the German industrial sector. There is more copper in Germany's household waste than in the world's biggest copper mine. The aim must be to increase the country's recycling rates – not only to further reduce the impact on the environment caused by mining but also to grow efficiency and supply German industry with raw materials. In 2050, the world's population will probably be about nine billion people and 85 percent of them will be living in the countries that we consider to be threshold economies to-

day. They all have the right to prosperity as well as to food, a good job and a good life. If the world fails to detach itself from its current monomaniacal dependency on minerals and fossil raw materials, then the result may be an increase in disputes for raw materials, mining rights and transport opportunities. Looking at the situation objectively, it is clear that ambitious recycling can help to solve geopolitical conflicts. It has been helping to strengthen Germany's competitive position for many years now.

There is, however, a huge gap between the targets and what is possible on the one hand and the actual situation on the other. Visions must become real otherwise they are of no use. What kind of momentum should the big picture give the recycling economy? The answer is it must become more sustainable. Sustainability that is like innovation, that creates new things and yet preserves what has proven to be good, that has true ethical value and aims to protect the environment as well as improve both the quality of life for humans and international justice. To spell it out, this means starting to recover phosphorus on an industrial scale, to improve technologies to recover materials from old landfills and to step up urban mining and link these with social innovations to cut costs. Moreover, we must succeed in finding cost-effective ways to produce biodiesel from waste fats and non-edible plants whilst taking ecological sustainability into account. Finally we must draw up a recycling strategy for copper and other industrial metals that puts a cap on the total amount of metal that may be in circulation at one time in order to promote innovation in the areas of design, production and use and lower the consumption of technical lines and facilities.

Systematic recycling means recovering as many secondary raw materials as possible. There is a place for using waste to generate energy, i.e. incineration, when materials recycling has been extended and new levels reached so that, for example, metals, which are found in low amounts in waste and in concentrated amounts in slag, can be recovered for higher quality recycling. Whilst "simply" incinerating waste in order to produce energy is (still) possible today in a waste management economy, it will only be used as a fallback in the recycling sector over the medium term. The move towards alternative energy will marginalise its economic viability.

The Sustainability Council recommends that the recycling sector be restructured. Why should we not succeed in recovering all our raw materials so that they can be returned to the economic cycle and Germany becomes a country that can provide its own raw materials? This is certainly a far-off

vision. Who though believed back in the 80s that East and West Germany would ever be reunited? Visions do not improve with age. The recycling sector can and must take steps to move forward and develop its own concepts, feasibility and momentum. Parliament should draw up a regulatory framework to support these efforts; regulations alone are not able to create a genuine recycling economy. This is what distinguishes the waste policies of the past – in short: the drinks deposit era – from the future challenges of a transformative materials policy. Companies should move ahead and design their products and processes so that they can be fully recycled in the future.

Effective methods would appear to be clusters from the world of science, entrepreneurial innovation and branding as well as cross-sector partnerships and road maps – as have been functioning successfully in the area of paper

We must create a new type of politics in Germany, no longer thinking in terms of licences and rates and no longer getting lost in a sea of political details.

recycling. This may sound theoretical and abstract but this would not be the case if we were to begin to develop a cross-sector sustainability strategy between recycling companies on the one hand and firms whose business models comprise large infrastructures involving final consumption, handling of materials, fleets of vehicles and industrial services. We must create a new type of politics in Germany, no longer thinking in terms of licences and rates and no longer getting lost in a sea of political details. Sustainability, taken seriously, is the right area for this especially as entrepreneurial strategies to create ecological and social sustainability – as shown by the German Sustainability Code – often improve business models. Put in a nutshell: we must make it possible for society to do without finite, non-renewable raw materials. To promote freedom and environmental protection. And simply because it is fun to preserve old values by heading down new routes. Despite the last thirty, forty years in which we have had a successful waste management and recycling sector, I still say: there's never been a better time to start than now.

Germany must become a country that provides its own raw materials

The “one-stop” service provider

REMONDIS OFFERS THE MOST COMPREHENSIVE RANGE OF RECYCLING SERVICES IN BERLIN

REMONDIS®

Looking at how REMONDIS’ competitors are spread across Germany, it is by no means a given that one of its largest branches should be found in the capital Berlin. Despite this fact, however, an extensive industrial estate has been set up at its Lahnstraße location in the Berlin-Neukölln district, a site which has been run under the red REMONDIS flag since 1996 and is home to many companies, all of whom are committed to sustainability. Being both a service provider and employer, it is no longer possible to imagine the city without REMONDIS.

REMONDIS focuses its activities on the concrete requirements of its customers in Berlin

The company’s business location on the Lahnstraße has a long tradition. It all began in 1914 when ‘Norddeutsche Kabelwerke’, a company founded in 1910, set up a new production facility on the Lahnstraße in Berlin to manufacture its special cables in response to the efforts being made at that time to install both a national electricity grid and the first telecommunications networks across the country. AEG took over a majority shareholding in the plant in 1942 and then used the facility to produce state-of-the-art signal and power cables for many decades. The Berlin plant, however, finally closed down in 1994 following the relocation of the cable production activities to Duisburg at the beginning of the 90s.

The 48,000m² grounds on the Lahnstraße were then put up for sale and purchased by REMONDIS. Under the terms of

the agreement, the main building – the only historical industrial structure in the Neukölln district – had to remain intact as it is a listed building. This opportunity came at just the right moment. Business growth had been effectively halted at that time as the company’s old facility in Werneuchen in the north east of Berlin had become too small. This former cable factory not only offered more space, it also enabled REMONDIS to move its activities closer to the city centre. Even if the business started there on a fairly small scale with just two skip trucks, it soon began to grow rapidly. The conditions there are ideal as it is located close to the motorway and has its own railway and canal links. REMONDIS is currently working together with the Technical University in Berlin on a research project to find out how the city’s historical infrastructure, in particular the canal, can be best used in the future.



(from left to right) Erhard Breisch, sales manager, Lutz Wedegärtner, site manager, and Dr Burkhardt Greiff, municipal projects manager, are continuing to expand REMONDIS’ site in Berlin

REMONDIS’ range of services proved to be very popular among its Berlin customers right from the very start. One of the main reasons for the company’s success was and still is its determination to focus fully on the individual requirements of its local customers. Lutz Wedegärtner, branch manager at the Lahnstraße business, has an explanation for this: “We are the only company in Berlin and Brandenburg that is effectively a ‘one-stop shop’ and able to provide a full range of services for practically all types of waste.” No matter whether it involves paper, card and cardboard,

“ We are the only company in Berlin and Brandenburg that is effectively a ‘one-stop shop’ and able to provide a full range of services for practically all types of waste.” Lutz Wedegärtner, branch manager REMONDIS Berlin



Innovative recycling processes, such as polystyrene recycling, are tested in Berlin until they can be used on the market. The site is connected to the European inland waterways providing a perfect infrastructure

waste plastic, old electrical devices, mineral waste from construction waste recycling processes or oily or even hazardous waste from industrial businesses, REMONDIS has the right sorting facilities and capacities at its Lahnstraße site for each and every recycling need.

Over the years, therefore, the Lahnstraße site has developed into an industrial estate with a large number of companies settling there, all of whom are committed to achieving sustainability and providing their customers with the best possible recycling services. Seven other REMONDIS subsidiaries and associated companies alone have set up business there including REMONDIS Electrorecycling, REMEX' subsidiary EMIX Mineralstoffe, REMONDIS Industrie Service and REMONDIS Medison. Moreover, REMONDIS International, the company responsible for all international activities, can be found there as well as Umwelt Kontrolllabor UCL, which tests the materials to be treated and helps to ensure that the various materials are handled in the safest way. Innovative recycling processes are also tested at the location such as the densification and processing of polystyrene from the packaging and construction industries so that it can be recycled into new insulation material. Such tests are always carried out in close cooperation with customers and continued until the processes can be used on the market. Other

companies also use REMONDIS' industrial estate including RHENUS' sister companies, Office Systems and Data Office, the waste management experts, innotec Berlin, and Wertstoff-Union Berlin or WUB, the latest addition to the site with its new paper sorting facility. TSR, another firm belonging to the REMONDIS Group, uses the infrastructure there for its scrap steel to access the European inland waterways and, thanks to its range of activities, complements the on-site WEEE recycling activities perfectly. Indeed all the cooperation work carried out between the associated companies there runs so smoothly that it creates real added value for their customers who are able to make use of all the different recycling processes and services offered by just one location.

All in all, a total 17 firms with over 500 employees and a fleet of more than 100 trucks collect, handle, sort and recycle waste from the capital city. Thanks to its full range of services, REMONDIS has become the first port of call for the industrial businesses located in and around Berlin. “It is a great feeling to be able to operate on the market with such a strong basis,” commented Erhard Breisch, sales manager at REMONDIS. This is only possible, if the different recycling services work together smoothly. According to Breisch, this is precisely what REMONDIS offers in Berlin: “We shall continue to grow together with our customers.”

REMONDIS, with its full range of services, has become the first port of call for the industrial businesses located in and around Berlin

Energy production

From biowaste to eco-friendly electricity

BIOGAS PLANT IN TRITTAU HELPS TO PRODUCE SUSTAINABLE ENERGY

A new biodigester, located in the south of the German state of Schleswig-Holstein, is an excellent example of how biowaste can be used intelligently. REMONDIS has played an important role in setting up this new facility. A combined heat and power plant (CHP) connected to the system transforms the content of the biowaste bins into eco-friendly heat and electricity.

The biogas concept, which is supported by REMONDIS, won through following a Europe-wide tender in 2011

In April, around 150 people from the world of politics and business met in Trittau, in the south of Holstein, to celebrate a truly sustainable investment. The occasion: the official opening of a new biogas plant. The company behind the investment, which also built and is now running the facility, is Abfall-Wirtschaftszentrum Trittau GmbH & Co. KG (AWT), a joint venture between the two privately owned companies Buhck and REMONDIS.

This is a perfect example of a successful concept drawn up as part of a Europe-wide tender and, as far as the districts



of Stormarn and Herzogtum Lauenburg are concerned, this facility marks an important step towards achieving greater sustainability in the region. The 30,000 tonnes of biowaste collected by the municipal company, Abfallwirtschaft Südholstein (AWSH), is now taken to the biogas plant where it is transformed into biogas using a digestion process. The biogas is then fed into the adjacent CHP which, in turn, uses it to produce electricity and heat.

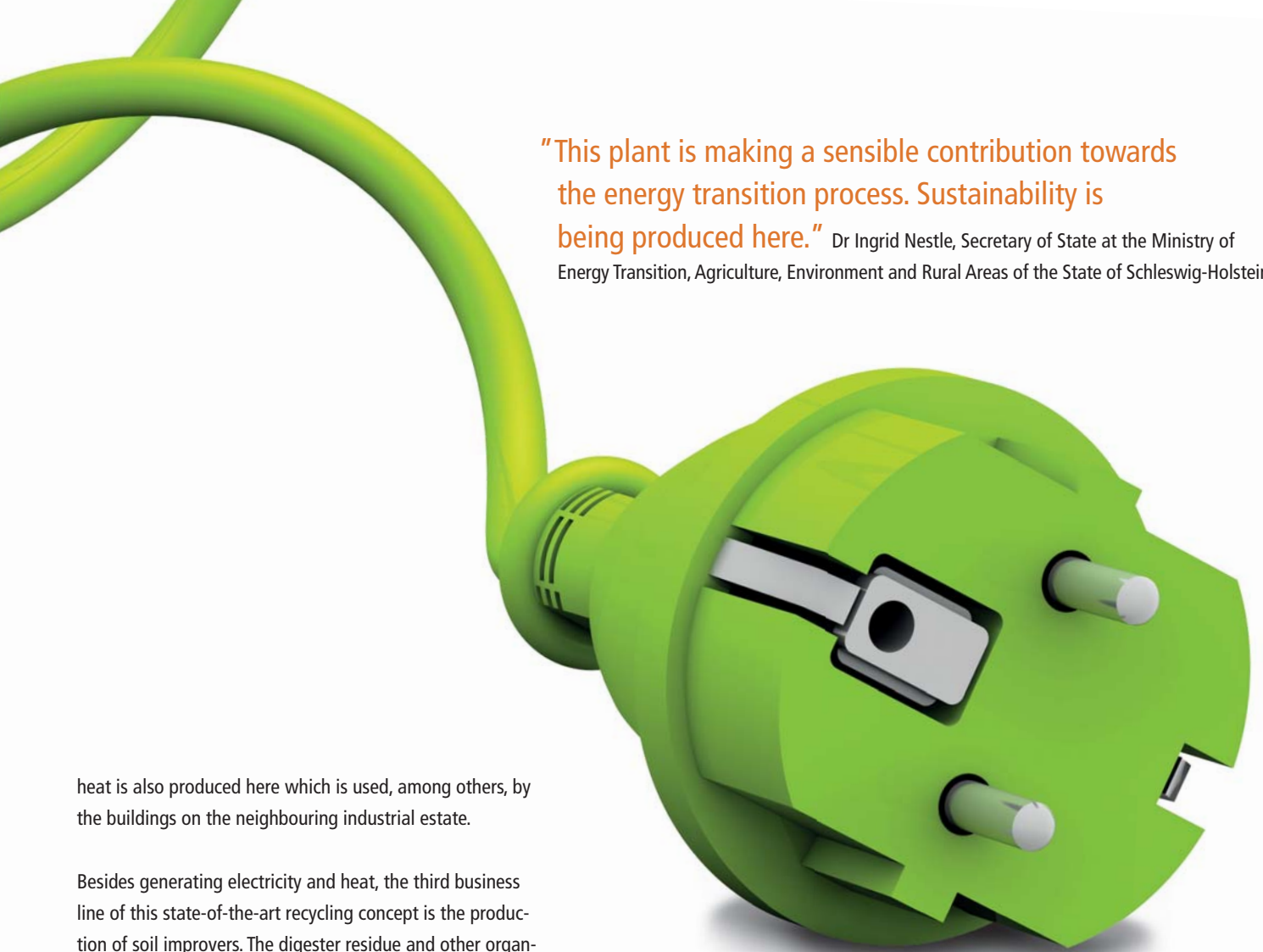
Exemplary environmental performance

The figures speak for themselves: each year the facility will help to reduce carbon emissions by approx. 3,000 tonnes. The amount of biogas generated during the test phase, which began at the end of 2012, was already sufficient to produce one million kilowatt hours of electricity. With the plant now in full operation, it is able to produce, on top of its own energy requirements, three million kilowatt hours of electricity each year which is being fed into the grid - enough to cover the needs of around 1,000 households. Moreover, more than two million kilowatt hours of district

"It was the strong cooperation work between all those involved in the project that brought about this great result. We will do everything in our power to ensure this success continues as we head towards a sustainable resource economy." Denis Kissel, Managing Director of Abfallwirtschaft Südholstein

(Source: Homepage AWSH, <https://www.awsh.de/news/news/artikel/biovergaerungsanlage-trittau-nun-offiziell-in-betrieb/>)

“This plant is making a sensible contribution towards the energy transition process. Sustainability is being produced here.” Dr Ingrid Nestle, Secretary of State at the Ministry of Energy Transition, Agriculture, Environment and Rural Areas of the State of Schleswig-Holstein



heat is also produced here which is used, among others, by the buildings on the neighbouring industrial estate.

Besides generating electricity and heat, the third business line of this state-of-the-art recycling concept is the production of soil improvers. The digester residue and other organic materials that are unsuitable for the digestion process are turned into compost or a high quality liquid fertiliser for agricultural businesses. AWT has been running a composting plant on the site since 1998. As well as building the new biogas plant, the company also converted its composting plant and integrated it into the new system.

A sustainable outlook

To begin with, the contract between Abfallwirtschaft Südholstein and Abfall-Wirtschaftszentrum Trittau has been signed to cover a period of ten years. The first goal here is

to ensure that the plant is used to its full potential: a new fee scheme is to be introduced next year which aims to encourage even more local inhabitants in Stormarn and Herzogtum Lauenburg to separate their biowaste from their residual waste. The new plant, by the way, operates 365 days a year, 24 hours a day, thus ensuring that the waste from the biowaste bins is used in the most sustainable way possible.

Each year, the facility will help to reduce carbon emissions by approx. 3,000 tonnes



Cylinders that are used to transport gases need to be treated with extra special care as their residual contents may be toxic or inflammable



Recycling

Down at the scrap yard

GAS CYLINDERS FOUND AMONGST SCRAP STEEL SHOULD BE RECYCLED "WITH CARE"

REMONDIS®

Gas cylinders are made of high quality metal which means that they often end up in scrap yards. Many of these gas cylinders, however, are not empty but still contain residual amounts of whatever they were made to hold: highly compressed air gases, inflammable gases or toxic gases. This means that they can be extremely dangerous if they are not handled correctly. The recycling specialists from IRZ Bramsche classify and sort these gas cylinders and then make them safe so they can be sent for recycling.

Each and every day, millions of tonnes of industrial waste metal are sent to scrap yards all around the world. Most of these metals are completely harmless and can be sorted and sent to steelworks where they can be melted down and turned into new steel products. However, scrap yards also often end up with metal containers that are not completely empty. These need to be treated with extra special care – especially cylinders that have been used to transport gases as their content may be toxic or inflammable. Time and time again, these cylinders explode when they are being shredded which sometimes leads to property being badly damaged or even, in the worst case scenario, staff being injured. Due to their lack of knowledge, these businesses often store the cylinders in skips or try to remove the gas. This is not only dangerous and bad for the environment, it is also against the law. Action needs to be taken here quickly to remedy the situation.

With this in mind, REMONDIS Industrie Service GmbH in Bramsche has developed a new concept to ensure that compressed gas cylinders at metal processing businesses

“Our new course has been especially adapted to the needs of employees working at scrap metal recyclers and teaches them how to handle gas cylinders safely. By doing so, REMONDIS is helping to increase work safety at scrap yards.”

Carsten Friedrich, REMONDIS Bramsche Industrial Recycling Centre

Those taking part also learn how to collect and store the cylinders safely. Oxidising gases must be kept strictly separate from inflammable gases. If the inspection of the cylinders reveals that they cannot be transported, then so-called recovery containers have to be ordered and used. Basic information about hazardous waste law and loading cargo safely is also taught during the courses as they both play an important role if the material is to be handled safely. Once the cylinders have been classified and sorted correctly, they are then transported to the Bramsche Industrial Recycling Centre along with all the obligatory transport papers and certificates.



are disposed of safely. The recycling specialists from Bramsche are now holding special training courses for the people working at scrap recyclers to teach them how to handle gas cylinders safely. By doing so they are also contributing greatly towards increasing work safety at scrap yards.

The courses are held on site at the scrap recyclers'. Having learned about the theory in detail, the participants then go outside into the yard to look for cylinders. The employees then learn on site how to classify the cylinders and sort them according to content and possible defects as well as according to how full they are. Particular attention is paid to the information stamped on the cylinder. If the valves are broken, then it is not so easy to find out how full the cylinders actually are – this is when nitrogen pistols and pressure reducers come into play.

The gas cylinders are checked again when they arrive in Bramsche and are then sorted according to their individual properties, contents and size and taken to the treatment plant on the grounds. The gases are extracted safely and fed via pipes into the company's own high-temperature incineration plant which is also located at the centre. Residual gases are neutralised in a gas scrubber system. Moreover, thanks to an absorber system, fluorides react to form fluorspar which can then also be thermally recycled. Once the gas cylinders have been emptied of their contents, the majority of them are flushed out with nitrogen. Thanks to REMONDIS Industrie Service's eco-friendly service, the high quality scrap metal is made safe so that it can be returned to the economic cycle.

The employees learn on site how to classify gas cylinders and sort them according to content and possible defects as well as according to how full they are



Insulation as a source of raw materials

PILOT EXPERIMENTS PUSH FORWARD THE RECYCLING OF COMPOSITE INSULATION BOARDS

Over the last 50 years, more than 860 million square metres of insulation board has been fitted across Germany helping to reduce heat loss and so considerably cut energy consumption. In order to improve the life-cycle assessment of this climate and resource-friendly insulating material even further, REMONDIS is now pushing forward its recycling activities in this area: by developing a special take-back system and separating the composite materials in the boards, the company is aiming to create high quality material life cycles that also include components that are generally considered to be difficult to recycle.

Back to production cycles: REMONDIS makes source materials from EPS and other plastics that can be used to manufacture many new products

When property owners wish to reduce their energy costs, their first choice tends to be exterior wall insulation systems. Around 50 percent of all possible savings can be achieved simply by using this type of insulation. Cutting heating costs and, at the same time, helping to conserve fossil fuels and prevent climate change – a powerful argument for home owners when deciding to use exterior wall insulation. Each year, therefore, approx. 40 million square metres of composite insulation boards are fitted onto buildings across Germany. Progress, however, is being made in this sector, too: homes are being converted or demolished, insulation systems are being modernised or replaced. What needs to be done now is to find the best possible way to recycle the insulation material that is removed during the demolition or building work.

The quantities of old unwanted insulation board are still relatively low. Looking ahead, however, these volumes are bound to grow: on the one hand, the first types of insulation systems that were used in the past are gradually reaching the end of their useful lives and, on the other hand, more and more privately and publicly owned buildings are being fitted out with these energy-saving systems. It makes sense, therefore, to plan ahead and develop solutions that ensure this growing volume of material can be recycled in the best possible way.

40

square metres
of insulation board
each year

Novel recycling methods

At the moment, insulation boards are, for the most part, collected together with mixed construction waste and processed in special facilities. The material streams resulting from these processes can be turned into recycled building materials or used to generate energy. REMONDIS is currently working together with Caparol, a leading manufacturer of composite insulation boards, to develop processes that will make it possible for the unwanted insulation boards to be used more effectively and for them to become a sustainable source of raw materials.

These insulation boards generally consist of several layers of different materials that have been firmly fixed together. Such materials often include polystyrene foam, mineral wool and mineral foam. One important prerequisite for achieving a high quality recycling system is to be able to detach the various layers and separate the different materials from one another. If the individual components can be separated in a commercially viable way, then each individual material can be sent for the best possible treatment. The expanded polystyrene (EPS), for example, could then be processed by REMONDIS for a number of different industrial uses and supplied as a raw material for pipes, profiled sections and many other products.

Initial tests to separate materials

Now that the first plans and concepts have been drawn up, pilot experiments have begun to separate the layers of the insulation boards. To be able to do this, REMONDIS is using its comprehensive know-how and the first-class technology at its construction waste recycling facility. Around 100 square metres of insulation board are being used to try out a number of different separation processes. These experiments are being carried out in a particularly suitable processing facility whose recycling rate for mixed construction waste lies at over 75 percent.

Once the technical conditions have been determined, then the setting up of a nationwide recycling system for the old composite insulation systems generated by construction sites across Germany will be routine business for EKO-PUNKT, REMONDIS' specialist company for take-back systems and one of Caparol's partners. At the end of the day, returning recyclable materials to production cycles on an industrial scale is one of REMONDIS' key areas of expertise. Over the last few decades, the company has repeatedly succeeded in bundling together waste materials, that were initially only found in small quantities and scattered far and wide, to create large material streams that have now become indispensable sources of raw materials.

 **EKO-PUNKT**

Saving energy & preventing climate change:

These insulation systems have cut carbon emissions by more than

740

million tonnes

Long-standing partners REMONDIS and Caparol are carrying out the pilot tests



Water

Science is important for the water sector

PROF. JENS TRÄNCKNER FROM THE UNIVERSITY OF ROSTOCK ON HIS COOPERATION WORK WITH REMONDIS

Having been awarded an endowed chair for water management at the Faculty of Agricultural and Environmental Sciences at the University of Rostock, Prof. Jens Tränckner took up this post on 01 June 2013. This professorship will be focusing on different aspects of the energy and water sectors, drinking water processing and wastewater treatment systems, asset management, the EU Water Framework Directive and the regulation of water supply in rural regions. This endowed chair has been created for a period of five years. A substantial amount of the personnel and overhead costs are being covered by REMONDIS Aqua.

Prof. Tränckner, how exactly is the cooperation work between EURAWASSER and the University of Rostock structured?

Prof. Tränckner: There are very close ties between REMONDIS Aqua/EURAWASSER and the University of Rostock, just as there are with the Warnow Water Association. We have already determined what our main areas of focus are to be and we intend to start working on these in the near future. One task that we are focusing on at the moment is to take a detailed look at the sewage treatment plant in Rostock to assess its capacity and performance levels. As its capacity is already fairly stretched, we need to find out how many more households and industrial dischargers can be connected to the facility in the future before extension work becomes necessary.

What other areas will you be focusing on?

Prof. Tränckner: Another key point will be to optimise energy consumption at the sewage treatment plant, including the treatment of sewage sludge, and to recuperate as

much energy as possible from the digestion of the sludge. Moreover, we are preparing for a dialogue on the question of whether and to what extent medicines should be removed by the sewage treatment plant in the future. This is still a controversial subject at the moment. As we wish to be prepared for this discussion, however, we have already started looking at possible technologies that could be used at the Rostock plant.

How is demographic change affecting the water sector?

Prof. Tränckner: This is an issue that primarily affects the rural regions which EURAWASSER serves. We have also put together a list of topics for this which, for the most part, deals with cost optimisation and the long-term, strategic development of drinking water supply. Basic questions are to be looked into here such as: is it worth keeping a waterworks running or does it make more sense to switch to a neighbouring region that may possibly also be affected by demographic change? The same question can be asked of



Prof. Jens Tränckner

the sewage treatment plants and drainage systems. There are, of course, a whole host of questions regarding the optimisation of plant operations, such as odour development and corrosion.

One of your main areas of research is "phosphorus recycling". Could you tell us something about this?

Prof. Tränckner: At the moment, the University of Rostock is working closely with the REMONDIS Group to prepare a "Phosphorus Recycling" Centre of Excellence in Rostock. As the University of Rostock has also just selected the subject of "phosphorus recycling" to be one of its main focal points, I hope that synergies and cooperation work can be set up within the university, too. REMONDIS has already made great progress in this area: sewage sludge is a well-known source of phosphate and REMONDIS RETERRA already recycles around 500,000 tonnes of sewage sludge each year and makes an important contribution towards closing phosphate life cycles. This direct use of sewage sludge returns approx. 10,000 tonnes of phosphorus to the natural cycle. Nowadays, Germany and other countries tend to incinerate contaminated sewage sludge. The phosphate, however, can be recovered in its pure form from the incineration residue. The technologies being used in this area and which are being promoted by REMONDIS will also have a future.

What can you tell us about the focus of your research work regarding the implementation of the new EU Water Framework Directive?

Prof. Tränckner: I have addressed the question of the implementation of the EU Water Framework Directive – from point of view of municipal water management – in a number of cities including Dresden as well as in other countries such as Belgium. The conditions for Mecklenburg are, however, completely different as we have a much greater overlap of diffuse and point sources as a result of the region's rural structure. Point sources dominate, of course, in more urban areas such as Dresden whereas diffuse sources can also, under certain conditions, have a great influence in Mecklenburg-Vorpommern. We are currently talking to the Agency for the Environment, Nature Conservation and Geology for the State of Mecklenburg-Vorpommern to see how far we can cooperate in this matter. Another point to consider here is that there are a large number of slow-moving bodies of water in Mecklenburg. Here, a single point source can, under certain conditions, have a great influence. And yet the legal demands put on small local authorities regarding wastewater treatment tend to be less stringent than those put on large sewage treatment plants. We are, therefore, thinking in particular about cost-effective methods to improve such facilities in order to minimise the influence of point sources in rural regions.

Just how unusual is such an endowed professorship as regards the whole water management sector in Germany?

Prof. Tränckner: It's certainly true that endowed chairs are normally awarded in the area of economics or areas with a clear technical focus, for example, mechanical engineering. This fact, therefore, makes it all the more impressive that a water management company is so committed to sponsoring scientific activities. I would certainly recommend that large local authorities, especially those in the east of Germany, cooperate with scientists in the field of water management. This is the only way to weigh up new opportunities and create new synergies.

Mecklenburg Vorpommern's Minister of Employment Manuela Schwesig honours EURAWASSER

EURAWASSER Rostock, a company belonging to REMONDIS Aqua, has been presented with a certificate by Mecklenburg Vorpommern's Minister of Employment Manuela Schwesig (SPD) in recognition of its measures to promote the compatibility of work and family. During a visit to the company's head office on 25 July 2013, Ms Schwesig handed over the "Work & Family AUDIT" certificate awarded by the Institute for Social Research and Vocational Training in Neustrelitz. Back in April this year, EURAWASSER Rostock had passed its re-audit with distinction.

Manuela Schwesig, who is also deputy chairman of the federal SPD party, stressed the fact that EURAWASSER had "undergone an inspection procedure regarding compatibility and passed with excellent results". She then praised the company's particularly family-friendly policies. These were not only reflected in the work schedules but also in the company's health management and staff development programmes.

Promoting the compatibility of work and family is firmly anchored in EURAWASSER Rostock's corporate culture as well as in the firm's demographic concepts. This was the first time that this certificate was awarded to a water management company.



Mecklenburg Vorpommern's Minister of Employment Manuela Schwesig during her visit to REMONDIS EURAWASSER

Working for the city and its residents

DISTRICT OF THARANDT IN SAXONY OPTS FOR WAL-BETRIEB'S WASTEWATER TREATMENT SERVICES



Having taken part in a Europe-wide tender process for technical and management services in the area of wastewater treatment, WAL-Betrieb, a water services provider based in the south of Brandenburg, was awarded the contract by the City of Tharandt which had been impressed by its cost-effective concept.



Karin Rusch, managing director of WAL-Betrieb, and Mayor Silvio Zieseemer following the signing of the contract

difficult technical and demographic conditions such as a decreasing population or an urgent need for an infrastructure upgrade.

The company's municipal client in Tharandt not only has high expectations when it comes to service and customer care but also in the areas of efficiency and reliability. "The operators should work to benefit the city and its residents. The city not only expects them to operate the business in a cost-effective manner but also to focus on issues such as reliability and trust when carrying out their work," commented the mayor Silvio Zieseemer. The managing directors of WAL-Betrieb, Karin Rusch and Christoph Maschek, are sure that they and their highly motivated team will make the project a success – for the benefit of their client and, above all, for the inhabitants of the city of Tharandt.

Background information

Tharandt is a small town in the Saxon administrative district of Sächsische Schweiz-Osterzgebirge. It is the seat of the Tharandt association of administrations and lies on the Wild Weißeritz River and beside the idyllic Tharandt Forest, 13 kilometres south west of Dresden. Approx. 5,500 people live in the city. The development of water consumption in the city indicates that there will be a constant amount of wastewater over the next few years. The city has 2 sewage treatment plants, approx. 52,000 metres of free-flowing channels, 9 pump stations and 5 overflow structures for mixed water.

WAL-Betrieb, a fully owned subsidiary of REMONDIS Aqua, is already involved in 15 municipal projects in the east of Germany as well as in Eastern Europe. The company has proven to be a reliable partner for local authorities and their residents thanks to its sound expertise in the area of operating water facilities – even under unfavourable conditions such as in regions adversely affected by demographic change. Their aim is to ensure they supply top quality services and keep water charges at a stable level even under

Calling in the divers

CLEAN WATER AND ENERGY WITH THE HELP OF INDUSTRIAL DIVERS

WAL-Betrieb GmbH, a fully owned subsidiary of REMONDIS Aqua, operates a total of six sewage treatment plants in the south of Brandenburg on behalf of the Lausitz Water Association. The largest plant, which is located in the District of Brieske and has 60,000 population equivalents and its own sewage sludge treatment facility, produces both energy and heat making it, for the most part, energy self-sufficient. To be able to achieve this, WAL-Betrieb invested millions of euros in a co-digestion plant in 2007 in which the organic material from industrial and commercial wastewater is co-digested. The methane gas produced is used to operate two combined heat and power plants. The company recently had to have its digester tank cleaned.

With the digester tank having been in use since the plant began operations in 1997, solid residue had attached itself to both the walls and the bottom of the tank where the deposits were between three and six metres thick. Having looked at the various options, the most cost-efficient method was to have industrial divers carry out the cleaning work. "Compared to the standard method of emptying the tank, far less time is needed to have the tank cleaned by divers which also means lower costs," said WAL-Betrieb managing director Christoph Maschek explaining their decision. Lutz Augstein, head of wastewater at WAL Betrieb, agreed: "We needed the whole of the flat bottom of the tank to be cleaned. This also helped to optimise the methane gas production process."

The sewage treatment plant in Brieske operates a technical win-win situation. Sludge from the wastewater treatment process and additional energy-rich organic waste delivered from industrial and commercial customers are digested. The result is clean water and sufficient energy and heat to cover the plant's own energy requirements. There was a simple explanation as to why using divers was the most cost-effective method to clean the tank: time. "We would have needed a week to empty the digester tank and ensure the contents were disposed of in an eco-friendly way,"

explained Lutz Augstein. "The method we selected is also the better choice as far as biology is concerned." It takes a long time to inoculate new bacteria and to get them to feed at the right levels. We wouldn't have been producing any energy during this time and so would have had to buy in energy which would have been expensive. The cleaning work carried out by the divers, however, hardly affects the biological make-up. During the work, the divers were able to loosen and suction off around 1,000m³ of deposits from the huge sludge tank which has a 3,000m³ capacity. Again and again, they made their way across the tank with their suction hoses moving in a wide path towards the tank wall. Working at a depth of 21 metres and being completely blind was a true challenge for the divers. The solid organic material recovered will be used to produce potting soil as is all the sludge from the sewage treatment plant's aeration tank. Clean water, energy, heat and high quality potting soil – recycling at its very best!



Using industrial divers proved to be the most cost-effective way to have the residue removed from the tank

Diver Steffen Rasche in action above the digester tank



Education

THE RECYCLING PROFESSIONALS gather pace

FIRST EDUCATIONAL THEATRE PERFORMANCES HELD IN NORTH RHINE-WESTPHALIA (NRW)

Following the extremely successful premiere of the RECYCLING PROFESSIONALS at Germany's most important education & training trade show, the didacta, in Cologne at the beginning of the year, REMONDIS' wide-ranging educational project is now moving into its second phase. Towards the end of the summer term, these 'raw material protectors' visited the schools that had taken part in the draw at the trade fair and won a theatre performance. THE RECYCLING PROFESSIONALS went to a total of ten kindergartens and schools in NRW where they inspired the children with their games and interactive teaching material and took their audience on a "mission to save our raw materials".

REMONDIS®


What recyclables go in which bin? What is hazardous waste? What actually happens to all the materials collected each day by REMONDIS and the other recycling companies? These are just a few of the topics looked at during the theatre performances so that the children – no matter how old or young they are – are real RECYCLING PROFESSIONALS by the end of the show. The first destination on this journey to save our raw materials was to Selm, a town in the south of Münsterland. A total of 170 children from the "St. Ludger" and "St. Fabian & Sebastian" kindergartens gathered in the town hall where they not only had a great deal of fun but were also introduced to the subjects of segregating recyclables and recycling. The children not only used Duplo bricks to build recycling bins but also sorted different types of recyclables and then put them into the right bins. "We deliberately get the children actively involved in these educational theatre performances as we

believe this is the best way to get them to truly understand the concept of segregating recyclable waste," explained Herwart Wilms, the managing director at REMONDIS responsible for this project.

Background information

REMONDIS' educational project, THE RECYCLING PROFESSIONALS, was developed together with experienced teachers for kindergartens, nursery schools and schools. This integral concept was presented at this year's didacta education trade fair – where it proved to be a great success – and involves educational theatre performances, teaching material and the award-winning "RECYCLING PROFESSIONALS" board game. Further information about the project can be found at wertstoff-profis.de.

“The world’s intensive use of our natural resources has led to a dramatic reduction in our planet’s reserves of raw materials. This educational project is for both pre-school and school children and aims to make children and teenagers more aware of the need to recycle and conserve our natural resources as well as to prevent climate change.”

Herwart Wilms, Managing Director at REMONDIS Assets & Services GmbH & Co. KG.

Largest performance to date held at a primary school in Bochum

Another of the schools visited was the Michael Ende primary school in Bochum where, on 11 July, 320 school-children took part making it the largest such theatre performance held to date. For an hour and a half, the school’s assembly hall was turned into a training camp where the children could learn how to save raw materials. By using interactive media and fun and games both on the stage as well as among the audience itself, the children were inspired to carry on this mission in the future, too. Through play, they learned just how important it is to conserve our planet’s natural resources as well as what they can do themselves to protect them. “All ten performances were a great success and we got positive feedback for all the shows. We only need to make a few minor adjustments to ensure we get the message across to our audience even better,” concluded Wilms.

The mission to save raw materials is just beginning

This successful mission to save our raw materials is by no means over. Plans are currently being drawn up to hold a further 35 performances at kindergartens, primary schools and secondary schools in NRW during the first half of the 2013/2014 school year. Besides holding these performances, REMONDIS also provides the different institutions with teaching kits for them to use during class. These

kits contain a variety of worksheets, games and pictures to make children and teenagers more aware of the issues of “sustainability” and “resource scarcity”. THE RECYCLING PROFESSIONALS are, therefore, not only continuing on their course to promote the responsible use of our planet’s natural resources but they are gathering pace, too. Why don’t you join in as well?



Robin, the protector of all raw materials, is the Recycling Professionals’ mascot



Customer report

REMONDIS and Vaillant – partners for a sustainable future

VAILLANT PRODUCES HIGH-TECH TO GENERATE CLEAN ENERGY AND HEAT



The Vaillant Group is an international, family-run company that has a history going back 139 years. Its core business is heating technology. With an annual turnover of around 2.3 billion euros, Vaillant is the second-largest European company in its sector. Moreover, it also manufactures state-of-the-art ventilation and air conditioning technology. Together with its 12,000+ employees, this Remscheid-based business develops and produces its range of products at 12 locations in six European countries as well as in China. At its plant in Gelsenkirchen, it develops and manufactures ultra-modern combined heat and power systems, heat pumps and solar thermal systems to ensure sustainable energy is generated in the future. At Vaillant, priority is given to sustainability in all parts of its business including the recycling of its production waste. It was, therefore, a natural step to work together in this area with a company that is just as experienced in intelligent waste management and recycling systems: REMONDIS.

In 2011, Vaillant was awarded the German Sustainability Prize

The Vaillant Group has its own sales networks in over 20 countries and exports its products to a further 60 countries. Founded in 1874 by Johann Vaillant, the company now offers a wide range of products – from highly efficient condensing boilers to numerous kinds of heat pump technology, solar and photovoltaic systems, pellet boilers and mechanical ventilation and heat recovery systems for low-energy and passive homes. Furthermore, its range also includes control devices that unite the individual solar, storage and heating components to create a single smart system. Its portfolio is rounded off with system components and custom-made spare parts which continue to be produced long after a product line has been discontinued. Indeed, in 2011, Vaillant was awarded the German Sustainability Prize

for its micro-combined heat and power system, a kind of 'family power plant' that can be used by detached homes to provide an independent supply of heat and power. The company's plant in Gelsenkirchen, which has 250 production employees and is home to its B2B customer service centre, is particularly special. Nowhere else in Europe are so many different types of future-oriented technology produced at one single location – whether it be combined heat and power systems, solar collectors or heat pumps. With so much sustainability in one range of products, it is clear that a pioneering waste management concept must be in place, too – especially as around 400 tonnes of very different types of packaging and production waste are generated by the plant in Gelsenkirchen every year.

Sustainability: an integral part of the company's philosophy

The Vaillant Group sees itself as having a special responsibility towards the environment and has, therefore, drawn up its own sustainability strategy. One of the main aims of this strategy is to protect the environment and our natural resources by handling such resources responsibly, systematically cutting carbon emissions, not impacting negatively on the environment and actively making use of every opportunity available to protect the environment. In order to reach these aims, it is working together with a strong and experienced partner, namely REMONDIS.

The first step was for REMONDIS project manager Roland Lenders, Vaillant's contact person for all waste management issues, to provide advice on all collection systems and technical equipment needed to ensure that a system was put into place that was both legally compliant and absolutely reliable. Together with Henrik Schuldzinski, head of supply chain management at the plant and responsible for developing a waste management concept, he first toured the facility to discuss waste logistics and container sizes,

Employees involved in the optimisation processes

Right from the beginning, Vaillant wished its own employees to be closely involved in the ongoing optimisation processes. The plant's workforce has, therefore, taken part in projects in which they can put forward their own ideas on how to separate, reduce and recycle waste. The results have been impressive: thanks to the input from the Vaillant employees alone, 10,000 euros were saved in just two years. "Our employees really enjoy doing this. They're helping the environment and cutting costs at the same time," commented Marko Zink, head of logistics at Vaillant in Gelsenkirchen. A look at the results of the sustainability certificate, which REMONDIS drew up for Vaillant and is calculated according to strictly scientific parameters, reveals that these efforts have also improved the company's environmental record: according to its 2012 waste life cycle analysis, the material streams which were collected separately and taken into account included paper, card, cardboard, plastic film, plastics, wood, operating supplies containing oil, adhesives and printing materials as well as discarded paint and varnishes. Thanks to these activities, Vaillant was able to reduce the need for primary raw materials by 521 tonnes. Moreover,

The plant in Gelsenkirchen alone cuts carbon emissions by 247 tonnes of CO₂ equivalents each year



(from left to right) Henrik Schuldzinski, head of supply chain management, Marko Zink, head of logistics, and Marc Dörpinghaus, plant manager at Vaillant in Gelsenkirchen

A total of 20 such collection points have been set up at Vaillant in Gelsenkirchen for recyclable waste

space requirements, manpower and documentation. The REMONDIS recycling experts then drew up an analysis of the situation and put forward suggestions to optimise the system. These included introducing uniform waste collection systems as well as developing bespoke information and billing systems that suited the customer's requirements best. The main aspects of the new recycling concept were and still are the reduction of in-house transportation routes by setting up waste collection points around the plant and equipping them with uniform bins and containers that have been clearly labelled to ensure waste is separated correctly. There are a total of 20 standard collection points in the plant which are emptied twice a day by a single shift of workers.

the plant in Gelsenkirchen cut its energy requirements by 1,648 MWh which in turn cut carbon emissions by 247 tonnes of CO₂ equivalents per year. Indeed, Vaillant has created its own system here. Its VPS – Vaillant Production System – ensures that the most important production interfaces are looked at regularly and discussed to see where, if possible, they can be optimised. Moreover, Vaillant is constantly promoting awareness among its staff. Together with REMONDIS, they are, therefore, well prepared for the future when it comes to sustainable recycling concepts. Marc Dörpinghaus, plant manager in Gelsenkirchen, summarised the situation: "I am happy that REMONDIS is our partner. Together we will be able to master any future developments and challenges."

Environmental services

Onto the seas in record time

NORWEGIAN BREAKAWAY LUXURY LINER BENEFITS FROM A SMART COLLECTION SYSTEM



The Norwegian Breakaway is the largest cruise ship ever to have been built in Germany. REMONDIS provided an unusual waste collection system whilst the ship was being equipped which helped to speed up operations. This meant, therefore, that this huge ship was able to put swiftly out to sea.

With its fleet of ships, Norwegian Cruise Line is one of the innovators in cruise travel

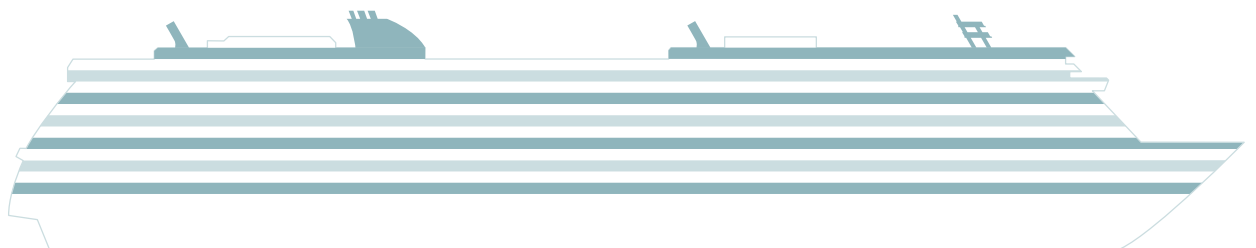
When the first ever passengers boarded the ship at its home port in New York, they found themselves surrounded by first class facilities. The Norwegian Breakaway has a total of 17 decks and only offers its guests the very best. Besides the 2,014 comfortable cabins, the ship also has 17 restaurants, twelve bars and lounges as well as a whole variety of exclusive leisure facilities on board – from an aqua park, to a ropes course and basketball court, to a nine-hole golf course.



Time saved thanks to smooth operations

This floating holiday resort was built at the North German shipyard, Meyer Werft, in just 18 months. Once construction work had been completed, the interior furnishings were then taken on board at the Columbus Cruise Center’s pier in Bremerhaven. Here, too, priority was put on the work being carried out quickly and smoothly.

On behalf of the company fitting out the ship, REMONDIS’ subsidiary Bremerhavener Entsorgungsgesellschaft mbH (BEG) and its two divisions BEG logistics and BAUER took over the tasks of collecting and recycling the waste generated by the work. To do this, it used a novel method that proved to be as simple as it was effective: lifting equipment developed by the company itself heaved the filled containers onto the pier ‘just in time’ where they were then emptied by BEG’s special vehicles. The lifting appliance then returned the containers to wherever they were needed.



Norwegian Breakaway

324
metres long

40
metres wide

1,600
crew members

4,000
passengers



This new method created two major advantages: on the one hand, tasks could be carried out considerably more quickly and, on the other, far fewer containers needed to be stored on the pier than would normally be the case. All those delivering the equipment for the ship benefited from this extra space. "Thanks to this new system, we were able to help shorten the ship's laytime. The ship was, therefore, able to set off on its first cruise earlier than expected," concluded Bernd Mante, project manager at BAUER.

Recycling to protect resources and the climate

Norwegian Cruise Line, the American shipping company that owns the liner, puts great importance on achieving energy and resource efficiency. The Norwegian Breakaway has a whole host of sustainable features from its optimised hull, to its low-energy LED lighting systems, to its heating systems that use heat generated by its fresh water and diesel generators. Not surprisingly, therefore, it placed similar importance on the waste generated in Bremerhaven being sent for systematic recycling.

Whether it involved paper and cardboard, timber, metals or sewage sludge from the on-board wastewater treatment

facility: over the six-week period, in which the ship was fitted out and tested, BEG handled around 550 tonnes of recyclable and residual materials achieving an excellent environmental performance. Frank Püchel, branch manager at BEG logistics, commented: "The Norwegian Breakaway project has shown that we have an excellent set-up in this field of business and are able to add value to projects run by ship outfitting specialists."

Regional waste management know-how

Bremerhavener Entsorgungsgesellschaft mbH (BEG) is owned by the City of Bremerhaven (25.1%) and REMONDIS (74.9%). It offers a range of services including environmental services, producing energy, supplying district heat, treating wastewater and recycling sewage sludge. BEG also has access to the specialist services provided by its two subsidiaries: whilst BEG logistics GmbH focuses on collecting and transporting wastewater and waste, Richard Bauer Rohstoff-Großhandel GmbH & Co. KG returns recyclable materials to the economic cycle.



Environmental services

Getting material streams moving

KNOWLEDGE TRANSFER HELPS REMONDIS TO EXPAND IN THE UKRAINE



Besides Poland, the Ukraine is the most important component of REMONDIS' Eastern European strategy. The company has achieved an impressive performance since it entered this industry-oriented country just five years ago: this family-run business has, above all, managed to set up sustainable structures in a number of major cities across the country.

REMONDIS®

A public private partnership with Saporoshje, a city with over a million inhabitants, has turned out to be REMONDIS' calling card for further expansion in the Ukraine. The well-functioning recycling sector, which has been set up in this industrial city, is still one of the greatest success stories in this country that acts – both geographically and economically – as a bridge between the EU member states and Russia.

The engine behind modern material cycles

Today, REMONDIS can be found across the Ukraine in the cities of Artemovsk, Melitopol, Kiev, Saporoshje and Cherkassy. Here, too, the company is able to demonstrate all of its key areas of expertise: as a strong, reliable partner for both local authorities and industrial customers and as an innovator in the water sector and moderniser in the field of

recycling. More often than not, it is the public private partnerships with the local authorities that are the driving force behind the creation of modern material cycles: REMONDIS ensures that efficient processes and new facilities are set up to conform with EU standards and, at the same time, pushes forward efforts to make the most of the valuable sources of secondary raw materials. Not only the more than 2.5 million Ukrainian citizens, who are served either directly or indirectly by REMONDIS, now benefit from these changes but the environment as a whole.

An impressive performance

One of the main reasons behind the progress made in the Ukrainian recycling sector is the fact that material streams are now segregated and collected separately using approx.

750,000

tonnes of recyclable and residual waste



15,000 containers. The recyclables are then processed thanks to the company's 500+ employees and its two state-of-the-art sorting plants. This formula for success has been rounded off with a fleet of vehicles for its municipal partner companies, which is being steadily modernised, and a transfer of know-how from Germany and Poland. After just half a decade, the figures are indeed impressive: each year, 750,000 tonnes of recyclable and residual waste from Ukrainian households and industrial businesses pass through REMONDIS' closed material cycles. REMONDIS' activities in the country are controlled from the capital city Kiev via its foreign subsidiary, TOV REMONDIS Ukraina.

Driving forward change

The close cooperation work and the strong partnerships with the local authorities also help to explain this success in the Ukraine. Together new targets are set and further progress planned. It was precisely for this reason that Bessubenko Anatolievitsch, deputy mayor of the city of Cherkassy, Sinaida Piddubna, managing director of REMONDIS' Ukrainian subsidiary, and Igor Daniliuk, head of REMONDIS' regional branch, got together for discussions in June. Cherkassy, the administrative centre of the identically

named district, and REMONDIS have been working together successfully since 2010. Over the last few years, both the fleet of vehicles and the containers there have been modernised and structures put in place to develop a sustainable recycling sector. The meeting held in June had been called to discuss further optimisations as well as to look at how their future work together might develop.

There are still many areas that need to be improved. The International Finance Corporation (IFC), which belongs to the World Bank, estimates that the Ukraine could be able to use more than 60 million tonnes of municipal waste to recover raw materials and produce energy by 2025. The secondary raw materials, that could be recovered, would have a value of 300 million euros. To be able to achieve these figures, however, further investments must be made in up-to-date technologies and in creating a modern recycling economy.

Since 2010, REMONDIS has been driving forward the process to set up a modern recycling sector in Cherkassy, a city in central Ukraine with approx. 290,000 inhabitants

Thanks to the public private partnerships with REMONDIS, much-needed investments can be made in the infrastructure in the Ukraine, too



Plant services

Full service package for biogas plants

BUCHEN'S FULL SERVICE PACKAGE ENSURES PLANTS RUN SMOOTHLY

With its biogas plant service, Buchen offers its customers a full service package covering the cleaning, inspection and servicing of biogas plants. Demand for these services is growing rapidly. This increasing demand is not only due to the current legal regulations but also to the ever-growing number of operators who are opting to build these plants to tap into a source of sustainable energy.

A biogas plant fermenter before it is cleaned using a vacuum unit



One problem faced by plant operators is the deposits – such as sand, crystallised struvite or other materials – that build up in the biogas plant’s fermenter or liquid tanks. If left there over a long period of time, these deposits can reduce the fermentation area which, in turn, lowers the performance of the plant. Moreover, such deposits can decrease the amount of heat released by the pipes in the fermenter. It is, therefore, essential that biogas plants are cleaned by professionals at regular intervals.

Across Germany – for a wide variety of plants

The “carefree package” developed by Buchen comprises the complete range of services needed for biogas plants. One important component is emptying and cleaning the tanks. To be able to do this, the content of the fermenter is sucked out using a heavy-duty vacuum system and then temporarily stored. This means that neither the materials that are suitable for producing energy nor the liquid content that can be used by agricultural businesses as a fertiliser are lost. Other services include removing the coating from the containers and recoating them, providing a filter and catalyst service as well as cleaning gas coolers, heat exchangers and pipes. Whether it be a Nawaro plant on a farm or a high performance, industrial fermenter: Buchen’s wide range of services is suitable for practically all types of plant and can, therefore, also be used for waste digestion plants, dry fermentation and wastewater treatment facilities.

Comprehensive services with stringent safety standards

As part of its full service package, Buchen also takes on all project management tasks as laid out in the latest legal regulations regarding the operating of biogas plants. Such tasks include risk assessment, budgeting, time management, workplace health and safety, environmental matters as well as explosion protection measures. In addition, its safety concept comprises shutting down the plants and then using nitrogen to make the system inert so that the plant can be accessed and cleaned safely. The package available to biogas plant operators is rounded off by the maintenance services offered by Buchen’s sister company, XERVON. XERVON, for example, services, repairs and fits all types of pipes or installs so-called ORC (Organic Rankine Cycle) systems to generate additional electrical power using the surplus heat from the biogas engines.

Thanks to its profound knowledge and extensive range of equipment, Buchen is able to tackle more unusual challenges as well. The company’s specialists have years of experience of cleaning chemical plants and are well versed in all aspects of health and safety. These provide important benefits for plant operators and are further good reasons for opting for the full service package currently being offered by REMONDIS’ subsidiary.



Important safety measures include, for example, measuring technology to protect the environment as well as personal protective gear for the employees



Inside a mobile combustion chamber – a flexible way to treat spent gas once a fermenter has been opened

A reliable partner for successful solutions

The projects already carried out by the company underline just how important it is to have specialists perform the biogas plant services. Whilst cleaning the high performance fermenter at the Heidelberg sewage treatment plant and preparing it for inspection, the container was found to be damaged. As a result work had to be delayed until the container was made structurally safe.

Stringent safety measures were required to clean the waste digestion plants operated by BRS Bioenergie in Deißlingen where biogas is produced in two large fermentation tanks. Buchen removed 360 cubic metres of solid and residual materials from the containers wearing respiratory protection equipment and observing strict safety standards at all times.

Specialist technology was needed at the Brandholz biogas plant in Usingen, Hessen. One of the main focuses of this project was the leachate tank in the interior of the plant that is used to collect fermentation liquid. Thanks to their special equipment, Buchen was also able to work in the narrow space between the fermenter building and the leachate tank – a compelling argument for Rhein-Main-Deponie GmbH to award the contract to Buchen, who had already cleaned another biowaste plant for them in the past. The specialists needed seven days for this project which involved emptying the containers as well as cleaning the container walls and pipes. A good 700 cubic metres of content was removed from the tank.



Portrait

Specialists with a head for heights

INDUSTRIAL CLIMBERS AND NET INSTALLATION SPECIALISTS COMPLEMENT SCAFFOLDING SERVICES

They are young, extremely fit and love their freedom: using ropes, industrial climbers access places that would otherwise be extremely difficult to reach using other technical means. Their job, however, has nothing to do with adventure and bravado. On the contrary: they need to have a highly developed sense of responsibility and great awareness of safety.

XERVON®

Whether it be installation, cleaning or coating work: XERVON's industrial climbers take over demanding tasks wherever the use of scaffolding is unsuitable

A professional course to become an industrial climber in accordance with FISAT guidelines (Professional Organization for Rope-Assisted Work Techniques) consists of many hours of theory and practical training. A number of scaffolders at XERVON's branch in Eisenhüttenstadt in the east of Germany have successfully completed this specialist course and reached level 2 at the training centre in Potsdam. Thanks to their climbing skills, they both strengthen and complement the scaffolding team. Having taken part in an additional integrated course to become an approved rescue specialist,

they also hold regular courses themselves to teach their scaffolding colleagues about rescuing techniques at height. Moreover, they have also participated in and completed a further course and are qualified net installation specialists enabling them to set up safety nets and nets around work platforms.

"Thanks to these colleagues, we stand out from our competitors, have extended our range of services and demonstrated that we understand our customers' needs,"

Industrial climbers

They are specialists who have completed a vocational apprenticeship course and then successfully participated in an additional course to qualify as a high-altitude worker with a FISAT certificate. When performing their tasks, they use special rope access techniques which guarantee both the highest levels of safety and professional work. Their range of services include for example: industrial cleaning work, installation work, window and façade cleaning work, installing pigeon deterrents and much, much more.

Top priority is given to safety

When an industrial climber is requested to carry out a certain task, the XERVON specialists first create a concept that describes the technical solutions and then present this to the customer. If the customer opts to use this concept, then the next step is to draw up an assessment of the risks. Taking stringent safety standards into account, the attachment points are determined and a full plan of execution set out.

commented the branch manager in charge. He is clearly very proud of these highly dedicated employees who have already been able to use their special skills on a number of projects extremely successfully.

Tasks crop up again and again for which scaffolding or other access solutions would be impossible to set up or would involve incredibly high costs that would be totally disproportionate to the work needed to be carried out. One example: changing a warning light 50 metres up a swing jib crane at a steelworks. Sometimes it is simply a matter of using the ropes and moving just a few metres either vertically or horizontally to get to a place that would otherwise be inaccessible. The industrial climbers are a perfect addition to our scaffolding services for such cases – and there are quite a few of them at our customers’ – and provide our customers with an extremely cost-effective access solution. Their additional qualifications enabling them to install safety nets and nets around working platforms are also a sensible addition to our scaffolding division.

As the XERVON industrial climbers come from a wide range of professions – scaffolders, metal workers, masons – they have extensive specialist knowledge which means they can execute their work in a precise and professional way after just a short briefing. The list of tasks that need to be carried out is long and varied and includes, for example, metal work, laying electric wires, installing cable ducts or repairing anti-corrosion coatings. The cleaning work tends to be particularly extensive: cleaning boilers, industrial facilities etc.

Diverse customers in and around Berlin and Brandenburg have already called in the company’s industrial climbers to have them perform specialist tasks. Last year, for example, they spent several days carrying out various activities at ArcelorMittal Eisenhüttenstadt during the shutdown of its plant. Such work included measuring the thickness of the walls of a number of large pipes near the blast furnace 50 metres above ground.

This must then be approved by the customer’s safety experts. Finally, the work can be performed: this involves a maximum of two people do the climbing work and a third watching from the ground below who can implement any necessary rescue measures in an emergency.

XERVON’s business location in Eisenhüttenstadt, which also includes the site offices in Jänschwalde and Hennickendorf near Berlin, has concluded diverse frame-

Competitors have become colleagues

During this project, they were provided with support by their rope access colleagues from Buchen Kraftwerksservice in Cottbus – a smart move by the two plant managers.

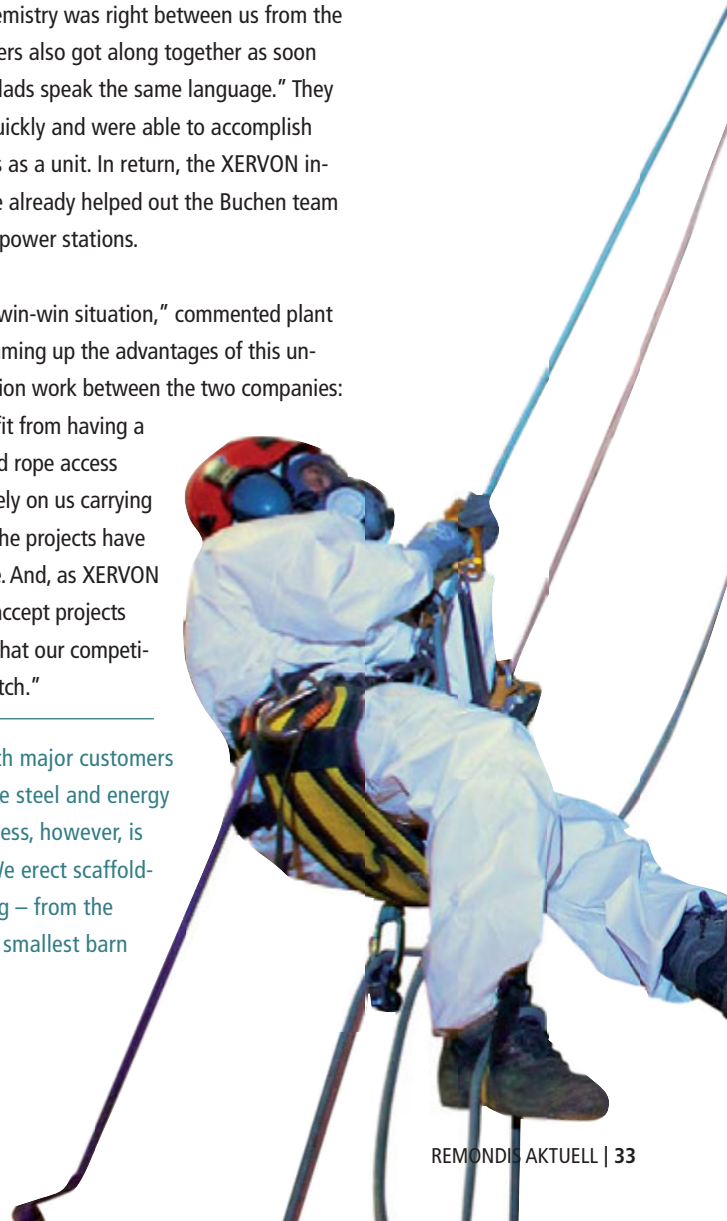


They really get to the bottom of things: attached to safety harnesses, the specialists work in the parts of industrial plants that are difficult to access such as furnaces and boilers

Shutdowns are always carried out according to a very tight schedule which means everything must run smoothly. Both XERVON and Buchen serve various power stations and industrial plants in the east of Germany. They know their jobs inside out and are well aware what is expected of them. It made sense, therefore, to call their new sister company to find out about the possibility of working together. Torsten Schenk said: “The chemistry was right between us from the very start.” The climbers also got along together as soon as they met up. “The lads speak the same language.” They created teams very quickly and were able to accomplish labour-intensive tasks as a unit. In return, the XERVON industrial climbers have already helped out the Buchen team to clean a number of power stations.

“This is a classic win-win-win situation,” commented plant manager Schenk, summing up the advantages of this uncomplicated cooperation work between the two companies: “The customers benefit from having a large team of qualified rope access specialists. They can rely on us carrying out the work even if the projects have a really tight schedule. And, as XERVON and Buchen, we can accept projects and provide services that our competitors are unable to match.”

work agreements with major customers from, for example, the steel and energy sectors. Project business, however, is just as important. “We erect scaffolding around everything – from the largest church to the smallest barn gable.”



XERVON Sweden: a new head office – a new project

CONTRACT AWARDED FOR THE LARGEST SCAFFOLDING PROJECT IN SWEDEN'S PETROCHEMICAL SECTOR



XERVON Sweden AB has a new head office: its employees moved into the building complex in Kungsängen, a city situated 32 kilometres north of Stockholm, in October 2012. These new headquarters are not only home to bright and friendly offices but also to a warehouse and more than 9,000 square metres of storage space. Other company branches are located in Örebro, Karlstad, Gothenburg and Norrköping.

XERVON Sweden is one of the country's leading scaffolding companies and primarily works in the infrastructure, construction and energy sectors as well as for industrial businesses (in particular chemicals and petrochemicals). One recent example: these north European experts have been awarded a contract to act as the sole scaffolding suppliers for the overhaul of the Preem Lysekil Refinery (capacity: 12 million cubic metres) which is due to take place this year. "This is the largest contract that our petrochemical industry will award for 2013. We are really proud that Sweden's biggest oil company has selected us to be its partner," commented Jens Sjöberg, managing director at XERVON Sweden.

Plans for the shutdown of the refinery are to take place in September and preparation work began in earnest at the beginning of January. As far as the scaffold experts are concerned, the greatest challenge of this particular project will be – as is the case for all shutdowns – the short space of time

that they will have to erect the huge volumes of material: at peak times, up to 180 scaffold specialists will be on site to set up around 80,000 cubic metres of scaffolding at the refinery.

XERVON's strength not only lies in its ability to deploy the large numbers of specialist personnel and the great volumes of material that will be needed. These Swedish scaffolding experts have also repeatedly demonstrated the high quality of their work and the great safety awareness of their workforce. QHSE (Quality, Health, Safety, Environment) is top of the list of priorities at XERVON Sweden as it is across the whole of the company group. Besides having been awarded the Swedish BF9K accreditation for QHSE, XERVON Sweden also holds the highly coveted STIB industrial certificate which guarantees that the company's workforce meets a number of standards. Each and every scaffolding specialist employed at XERVON Sweden has been trained accordingly. All prerequisites are in place, therefore, for the company to provide another perfect performance during the shutdown of the Preem Lysekil Refinery.



Being a professional service provider for the process industry, XERVON has a well organised set-up in Sweden, too.

Trade association news

Legislation

Giving priority to secondary raw materials

BDE CALLS FOR BETTER FRAMEWORK CONDITIONS TO ACHIEVE FAIR AND TRANSPARENT COMPETITION

When it comes to German recycling legislation, little progress has been made over the last four years. With the general election having taken place just recently, a new legislative period is about to begin. The long overdue regulations regarding the secondary raw material and recycling sectors will once again be on the to-do list for the new MPs.

In order to drive forward a resource economy focusing on recyclables, the BDE (Federal Association of the German Waste Management Industry) has drawn up a ten-point list of comprehensive measures. It contains practical recommendations on what action should be taken and aims to achieve ambitious recycling rates for important individual material streams including commercial and mineral waste as well as biowaste. In addition, it clearly calls for improved framework conditions to achieve fair and transparent competition.

As far as the BDE is concerned, the performance of the last four-year legislative period was sobering. Just one single result was able to be achieved regarding legislation for the secondary raw material and recycling sectors: the translation of the 2008 European Waste Framework Directive into national law with the 'KrWG' (Recycling Law) which came into force at the beginning of June 2012. There are, however, even reservations concerning this law. BDE President Peter Kurth commented: "Six trade and five environmental associations have filed a complaint with the authorities in Brussels against this law. The BDE is assuming that Brussels will call on the German government to make changes to the 'KrWG'."



Peter Kurth,
BDE President

According to the BDE, the 'KrWG' not only lacks ambitious recycling rates that go beyond the 65 percent already reached in Germany today. It also fails to express clear commitment to materials recycling by strictly implementing the five-stage waste hierarchy. Furthermore, there are still a number of legal uncertainties, in particular regarding the kerbside collection of recyclables from private households. An implementing regulation would be useful here – this is, however, still outstanding.

Creating legislation is one of the most important tasks of the German Bundestag. This is where all national laws are passed

People

Heading upwards

FOUR REMONDIS APPRENTICES TALK ABOUT THEIR EXPERIENCES

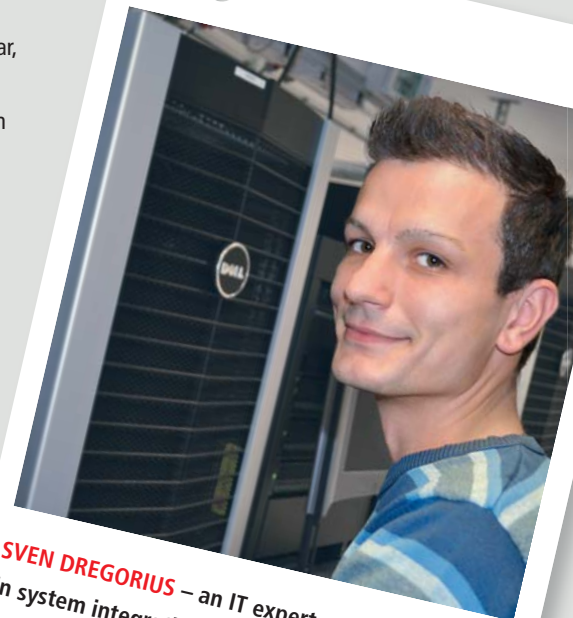
Excited, calm, curious, euphoric, beaming, nervous ... 01 August is an important date for a large number of young people in Germany. Just as it was for the 620 new apprentices at REMONDIS and its sister companies SARIA and Rhenus who took their first step towards a hopefully successful and fulfilling career. The company group is currently preparing just under 2,000 apprentices for their working lives in a variety of professions with their different tasks and requirements. Julia Brecht, Benjamin Stephan, Sonja Buschmeier and Sven Dregorius have each chosen their own path within Germany's largest water and recycling company and talk here about their experiences, expectations and wishes.



SONJA BUSCHMEIER – training to become a chemical technician (2nd year)

>> **Production plants and chemical processes** – these are two areas that Sonja Buschmeier is passionate about. And so the 20-year-old decided to train to become a chemical technician. "It was a friend who told me that REMONDIS offered apprenticeship jobs in this field and so I decided to apply to the company – also because of its size and regional proximity. So far my experiences here have been really positive although I had to prove myself to my male colleagues at the beginning (laughs). The thing I really like about REMONDIS is that I've been given the opportunity to work in many different areas and so I am learning new things all the time. The apprenticeship is, therefore, not just in one particular field and so I am effectively being trained to become an "all round" specialist and can choose which area I wish to focus on once I've finished my course. I also think it's really exciting that I can work in REMONDIS' fire brigade here at the plant alongside my job. This makes my work at the Lippe Plant even more varied and interesting."

>> **As far as Sven Dregorius is concerned, nothing can beat IT and computers.** In June this year, the 23-year-old successfully completed his apprenticeship to become an IT expert for system integration and is happy that he will be continuing to work at REMONDIS. "At REMONDIS, you are part of a team and responsible for your own area of work. That way you are able to specialise in one particular field. At the same time, when I was here as an apprentice, I had the opportunity – if there was sufficient time and materials available – to suggest projects, propose solutions and then work on them accordingly. During my final apprenticeship year, I was able to change to the network department which is involved in both the local and national networking of the computer systems. I'm still working in this department and I'm planning to do a number of Chamber of Commerce further training courses in my specialist area of "networks/security". My tip for apprentices just beginning their course: it's a good idea to put out feelers during your apprenticeship years to find out which fields suit you best."



SVEN DREGORIUS – an IT expert specialising in system integration

>> Benjamin Stephan discovered his interest in lorries and large machines during his basic training at the German Army. "Professional truck drivers working at companies like REMONDIS have to take on high levels of responsibility as they not only transport "normal" materials such as paper and cardboard but also hazardous substances such as solvents or hospital waste. This was the reason why I applied to work here. And I've never once regretted my decision. On the contrary – my initial expectations have in some cases even been exceeded as the work here is not "simply" a case of transporting recyclables and waste. The apprenticeship offers a whole range of different and responsible tasks such as planning and organising the trips, ensuring the cargo is secured on the trucks safely and checking, servicing and looking after the various types of vehicles. Every day is fun, not least because the atmosphere here at REMONDIS is really good and I always get the support I need from my bosses and colleagues. Once I have finished my apprenticeship, I would really like to stay and work for REMONDIS and be on the road for them all around the country."



BENJAMIN STEPHAN – training to become a professional truck driver (2nd year)



JULIA BRECHT – training to become an industrial clerk (2nd year) and a BA student

>> Julia Brecht knew when she was at school that she wanted to work in commerce. The decision she needed to make, therefore, was whether to go to university full time or do an apprenticeship in the area of commerce. "When I was researching my different options, I came across the so-called dual course which combines university and an apprenticeship. I liked the idea of uniting theory and practical training and so I started looking for a company that offered this type of course. I was interested in REMONDIS right away as it offers all the advantages of a large international company and I was also very attracted by the idea of working in the water and recycling sectors. I was able to experience a great variety of business areas during my first year and I now know that I would like to work in the field of accounting and controlling. As a result, I am hoping to complete my apprenticeship in one of these departments once I have written the final Chamber of Commerce exam in January 2014. This dual course requires high levels of commitment and is very time-consuming but it also allows you to gather important practical experience right from the start. I'm really pleased that I decided to do this apprenticeship at REMONDIS."

News in brief

Two new honorary posts for REMONDIS managing director Herwart Wilms

Herwart Wilms, Managing Director at REMONDIS Assets & Services GmbH & Co. KG



The Federal Environmental Agency (UBA) has selected Herwart Wilms to be a member of its new 'Resources Commission'. The job of the Resources Commission, which was set up this year, is to provide the Federal Environmental Agency with concrete suggestions on how to further develop resource policies in Germany and the European Union. Moreover, they should make efforts to ensure that more priority is given to the protection of natural resources in Germany and the EU. As a member of the commission, UBA President Jochen Flasbarth has succeeded in gathering together a group of experts from the worlds of business,

science and administration. Herwart Wilms, a managing director at REMONDIS Assets & Services GmbH & Co. KG, brings with him a wealth of expertise in the areas of recycling and dual systems. Other commission members include Matthias Buchert from Öko-Institut e.V. and Professor Martin Faulstich, who advises the German government on environmental issues.

Moreover, Herwart Wilms was elected to the board of the BDE (Federal Association of the German Waste Management Industry) during this year's annual meeting. All previous members were re-elected and the board was extended to include two further people. The new members are REMONDIS managing director Herwart Wilms and Dr Henning Knorr, a board member at Karl Meyer AG. Wilms' work is focused on strengthening the secondary raw material sector, in particular by calling for higher recycling rates and reliable political framework conditions for greater competition and transparency. Members of the meeting expressed their hope that the German Bundestag would revisit the issue of implementing the five-stage waste hierarchy so that German law fully conforms with that of the EU.

News in brief

Michael J. Schneider appointed a member of the PR committee at Kiel University of Applied Sciences

The University of Applied Sciences in Kiel has selected REMONDIS press officer Michael J. Schneider to be a member of its newly formed PR committee as part of its Media Department. As a committee member, Schneider will be using his business experience to accompany and help shape the university's course covering PR work and corporate communications. Kiel University of Applied Sciences places great importance on its communication students getting a close insight into how the business world really functions. The PR committee also has members from other companies besides REMONDIS including Siemens, Drägerwerk, Provinzial and the Thüringen State Chancellery.



Michael J. Schneider, REMONDIS Press Officer

> Impressions



◀ (from left to right) Martin Seeber (TOP Sportmarketing), Wolf-Dieter Wolf (LSB), Vera Gäde-Butzlaff (BSR), Dr Marion Bleß (DKLB), and Stephan Tschentscher (REMONDIS) handing over a donation for the Berliner Sport's "Future Award"

◀ Norbert Rethmann welcoming this year's new apprentices to the Lippe Plant in Lünen



◀ (from left to right) Andreas Bankamp, Managing Director EURAWASSER Aufbereitungs- und Entsorgungs GmbH and REMONDIS Aqua GmbH & Co. KG, Rainer Albrecht, Member of the State Parliament representing the constituency 5, Rostock II (SPD), Ingo Mirsch, Commercial Manager EURAWASSER Nord GmbH, Frank Martens-Jung, HR Manager EURAWASSER Nord GmbH, Ralf Mucha, Member of the State Parliament representing the constituency 4, Rostock I, Manuela Schwesig, Minister of Employment, Equality and Social Affairs in the State of Mecklenburg-Vorpommern, Robert Ristow, Managing Director EURAWASSER Nord GmbH, Julia Behrendt, Head of Corporate Development EURAWASSER Aufbereitungs- und Entsorgungs GmbH, Gesine Strohmeier, Managing Director EURAWASSER Nord GmbH, Doris Löhning, Chairman of the Works Council EURAWASSER Nord GmbH, Diana Wiedbrandt, Lecturer / Employee at the ISBW (Institute for Social Research and Vocational Training)

◀ REMONDIS Board Member Thomas Conzendorf hands over a prize to Claus Jeske who was named the best sales employee for the month of July



◀ (from left to right) Dr Werner Kook, Board Member NIAG, Markus F. Schmidt, Managing Director REMONDIS Energy & Services, Dr Norbert Walter-Borjans, Finance Minister in the State of North Rhine-Westphalia, Reiner Schmeltzer, Member of the State Parliament in North Rhine-Westphalia, and Klemens Rethmann, Board Member Rethmann AG & Co. KG, during their visit to the Lippe Plant in Lünen

◀ A number of REMONDIS TOV Ukraine's employees at the Kiev city marathon





2013



2016



2019



2022



2025



2028



2031



2034



2037



2040



2043



2046



2049



2052



2055

**2058?**

No Zircon – No Brilliant Smiles

Dental prostheses must be functional and aesthetic. With its natural look, biocompatibility and durability, zircon meets these requirements better than any other material – so demand is correspondingly high. The availability of this mineral has been classified as particularly critical; reserves are expected to run out in ca. 45 years. REMONDIS is developing solutions to recover this 'white gold'. The highest levels of quality, worldwide. For a secure future. **German Qualität.**

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