

WASTE ELECTRICAL & ELECTRONIC EQUIPMENT – A VALUABLE BUT DANGEROUS COMMODITY

News: Ecology as the driving force behind the economy – A guest commentary by Sigmar Gabriel, Federal Minister of the Environment

Water management: Privatisation means stable prices

Circular-flow economy: REMONDIS opens Europe's largest WEEE dismantling centre

People: Poland focuses on teaching about the environment

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A GUEST COMMENTARY BY SIGMAR GABRIEL

Anyone intending to become a successful competitive force must have modern environmental policies. In his guest commentary, Sigmar Gabriel, Federal Minister of the Environment writes, "Ecology is turning into the driving force behind the economy." With natural resources becoming more and more scarce, priority must be given to keeping raw materials and energy sources within the economic cycle. **Page 4**



A SECURE FUTURE WITH A PRIVATE PARTNER

Demographical changes are proving to be a great challenge for the water management sector. A sustainable modernization of the infrastructure for supplying drinking water and treating wastewater is essential. REMONDIS Aqua in Lausitz shows how this can be achieved without putting an even greater burden on taxpayers. **Page 10**



WEEE AS A SOURCE OF RAW MATERIAL

Very few markets experience such rapid changes as the market for electrical and electronic equipment. The growing mountain of discarded equipment has become a problem throughout Europe. In Germany, it is now obligatory for WEEE to be recovered and recycled. REMONDIS Electrorcycling has opened up the largest and most modern dismantling centre in Europe punctually in time to coincide with the start of this new system. **Page 18**

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EDITORIAL



Thomas Breitkopf

Dear Readers!

SETTING AN EXAMPLE FOR EUROPE

24 March 2006 was a very special day for the water management and circular-flow economy. This was the day when it became obligatory for waste electrical and electronic equipment to be taken back in Germany. The implementation of the law involved a great deal of work – and is, at the same time, a milestone on the way to achieving a resource-saving and environmentally aware industrial nation. With its WEEE Act, the 'ElektroG', Germany has taken over a leading position in Europe and set an example of how to implement the European directives for other countries. However, some aspects of the system must also be criticized. The German take-back system is proving to be a great logistical and organizational challenge because it is over-regulated. It must be simplified and made more practical - read more about this on page 21.

GUESTS FROM ALL AROUND THE WORLD AT REMONDIS

24 March 2006 was a special day for REMONDIS, too. We put Europe's largest and most modern WEEE dismantling plant into operation at our site in Lünen just in time to coincide with the start of the new law. 300 guests from Germany and abroad travelled to Lünen to see the red curtain fall from this high-tech plant. This event underlined in an impressive manner just how international REMONDIS has become. We were able to welcome customers and business partners from ten countries including Japan, Poland, France and Ireland. You can learn more about this opening ceremony on page 18.

SUFFICIENT CAPACITIES AVAILABLE

For almost twelve months now, it has been illegal to dump untreated waste in landfills in Germany. It was foreseeable that this new law would lead to there being a temporary capacity problem for commercial waste in thermal and mechanical & biological treatment plants. Temporary stockpiles of waste, however, have not been necessary – and this is still the case. A large number of plants in other Western European countries, which fulfil the high technical standards, have sufficient free capacities. These capacities must be used until the plants currently being constructed in Germany are up and running. The situation is already beginning to ease. Turn to page 6 to read our report.

GREATER COMPETITION ON THE WATER MARKET

The public sector strikes over the last few weeks have caused a stir – and given old discussion topics a new lease of life: the demand for more competition and increased privatisation. This demand is also targeted at the water market with its unusual structure here in Germany. Several thousand companies – most of them municipal – are involved in supplying drinking water and/or treating wastewater. In comparison: there are only four in France. Consumers feel the full force of this fragmented and uneconomical German system: in no other country are the prices and fees so high (page 10). However, there are some positive examples, too. On page 14, we have put together a report on REMONDIS Aqua's future-oriented project in Lausitz.

I hope you find this magazine informative.

Thomas Breitkopf, Board Member

Environmental policies

Ecology as the driving force behind the economy

A GUEST COMMENTARY BY SIGMAR GABRIEL, FEDERAL MINISTER OF THE ENVIRONMENT

In times of ever decreasing resources, it has become even more important to use raw materials and energy sources sparingly. One of the top priorities of the circular-flow economy is, therefore, to recover raw materials and substitute fossil fuels. Economic and environmental policies are pulling together to achieve this. In his guest commentary, Sigmar Gabriel writes about the new cooperation between the economy and ecology:

Environmental policy is on the verge of experiencing a revival. Unlike the last time, at the end of the 70s and the beginning of the 80s, this renaissance shall not result from pressure caused by environmental problems but because of the ever increasing pressure from the economy. The expected demands of more than nine billion people for energy and resources over the next 50 years shall not be able to be fulfilled with the same methods as the development of one billion people in the industrial countries over the last 50 years.

I believe, therefore, that this shall mean that:

- modern environmental policies and successful economic policies are no longer in conflict with one another. On the contrary, the opposite is true.
- creating competitive advantages shall only be possible by having more modern environmental policies and not by having fewer. Ecology shall become the driving force behind the economy and vice versa.
- modern environmental policies shall lead to a more just world with more sharing: implementing modern technology consistently and quickly shall create basic preconditions enabling people to live with dignity and in prosperity in all countries on our planet.

“In view of the fact that natural resources are becoming more and more scarce, it is important to keep raw materials and energy sources within the economic cycle as much as possible.”

The circular-flow economy shows in an exemplary manner how a concrete environmental goal can have a direct positive effect on the economy. It plays a major role towards achieving Germany's targets of reducing emissions and protecting natural resources.



Sigmar Gabriel, Federal Minister of the Environment

SHORT PROFILE

- born in 1959 in Goslar (Harz)
- secondary school teacher for German, politics and sociology
- 1977: joined the SPD
- 1990-2005: member of the Lower Saxony state parliament
- 1999-2003: Minister President of the State of Lower Saxony
- since November 2005: Federal Minister of the Environment, Nature Conservation and Nuclear Safety

Emissions of the landfill gas methane, which is particularly harmful for the climate, have fallen by more than two-thirds since 1990 as a result of the increased treatment of waste and especially since it has become illegal to dump untreated waste in landfills. This is by no means the end of the story: circular-flow businesses can make more use of waste to recover materials or energy. On the one hand, more and more raw materials are being recovered from waste. On the other hand, fuel from waste is being used more and more to replace fossil fuels. Making more use of the heat generated from waste incineration shall also contribute towards Germany fulfilling its Kyoto obligations.

The circular-flow economy has three aims: firstly, to minimize negative effects on the environment and health – i.e. reducing harmful emissions. Secondly, to keep raw materials and energy sources within the economic cycle as much as possible as natural resources are becoming more and more scarce. And thirdly, to improve energy and material efficiency. None of this is possible without technology or a change in behaviour: this begins with the separation of waste in private households, with waste collection logistics and with modern sorting procedures. It includes advanced biological processes and landfill and incineration technology and it leads to integrated material flow concepts within production and to ensuring that the life span of a product is as long as possible.

“By producing less waste and using waste more to recover materials and energy, we should succeed in being able to do without above-ground landfills – both for non-pre-treated and pre-treated waste.”

The ban on dumping untreated waste in landfills, which came into force almost a year ago, was a milestone for the circular-flow economy. Both the federal Government and the individual states kept to the deadlines – despite the many prophecies of doom. Both public and private businesses have invested more than 7.5 billion euros in building new, state-of-the-art treatment plants. It can now be guaranteed that household waste and bulky waste is recycled in an environmentally friendly manner.

But we are not resting on our laurels. The aim is to continue to develop the waste and circular-flow economy so it becomes a material economy. By 2020, we should, for the most part, no longer need to dump waste in above-ground landfills. This can be achieved by producing less waste, by using waste more to recover materials and energy as well as by pre-treating waste which cannot be recycled using more sophisticated technology. By processing the biggest material flow, namely mineral waste such as earth, construction waste, slag and ashes, we can greatly reduce the mining activities for natural resources. This must be achieved without problems and extended through clear legal frameworks.

Landfill ordinance

Heading in the right direction with the TASI

THE FOOD WASTE BIN CAN TAKE THE PRESSURE OFF THE MARKET

For just under a year now, it has been illegal to dump untreated waste in landfills in Germany. The 'TASI' (Technical Guidelines for the treatment and disposal of municipal waste) and the 'Abfallablagungsverordnung' (Landfill Ordinance) have laid down the new line of approach for the branch in Germany: away from landfills towards material and energy recovery.

An international overview

There is still a long way to go before the EU Landfill Directive has been implemented in all the member states in a satisfactory way. With its TASI law, Germany has taken on a leading position alongside Austria, the Scandinavian countries and Iceland. The situation is considerably more critical in other countries. France has undertaken very little to achieve a more structured dumping of waste in landfills or to reduce the volumes being deposited. Spain and South Italy are still having to cope with the large number of illegal dumps containing household waste.

Transitional periods still apply for the ten new EU member states. The EU pays grants to clear up old landfills and to build new landfills in accordance with EU standards. Poland is rapidly approaching EU standards and Hungary, too, is making great progress. Slovakia, Greece, Malta and the Czech Republic, however, have to date been less successful.

From an ecological point of view, this development has meant that great progress has been made. More than half of all landfills in Germany were closed over the last five years and able to be recultivated – as a result there has been a great reduction in the amount of methane, a landfill gas which is harmful for the climate, being released into the atmosphere. In all probability, the number of landfills in Germany shall have fallen to under 100 by the year 2009.

Material flows have been redirected: municipal waste must now be treated in mechanical-biological processing plants (MBP) or in thermal treatment plants (WIP). The aim is to recover as many circular-flow materials as possible. Capacities must be increased, new plants must be built. Talk of ‘capacity constraints’ can be heard again and again as the plant construction work and extension work has not yet been completed. But such discussions are incorrect – as, except in a very few cases, there are always remedies to be found:

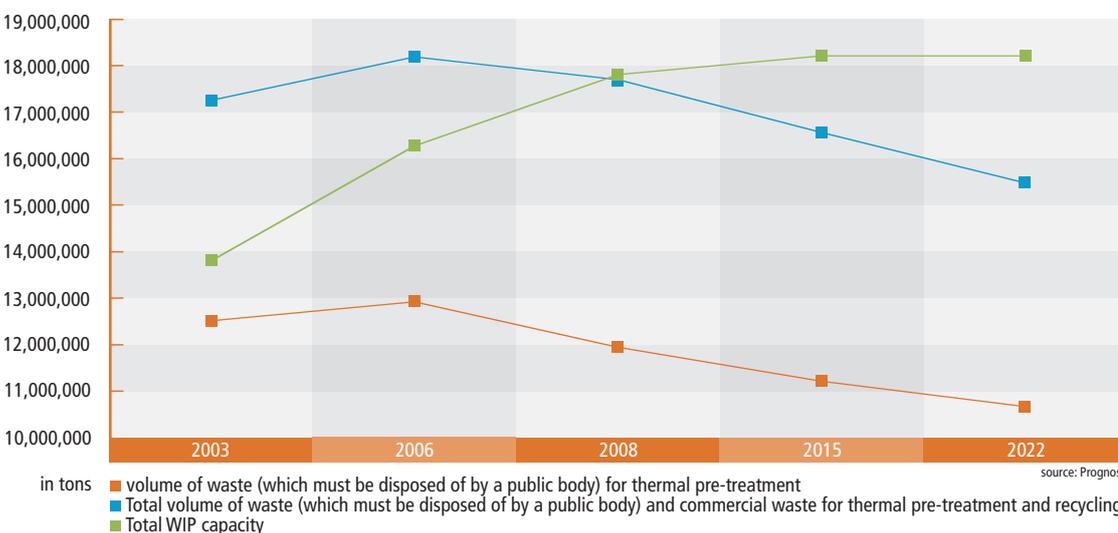
- the strain on the pre-treatment plants could be reduced considerably by simply introducing food waste bins across the country to every household. At the moment, only every second household has such a bin. Approximately 4.5 million tonnes of organic waste ends up in the bin for general waste – although there is sufficient capacity at composting plants and fermentation plants.
- another method to further reduce the pressure on WIPs and MBPs is to separate paper, glass, packaging and wood. It is above all the many business establishments which fail to separate these recyclable materials.
- the temporary capacity constraints in Germany can be avoided: there are plants in other Western European countries which have free capacities and these should be used. The plants use technology which is of a very high standard.

“On average, here in Germany, the costs for processing residual waste are twice as high as for processing organic waste. Municipalities could reduce the pressure on their budgets by introducing food waste bins - and yet many are still hesitating.”

Aloys Oechtering, a REMONDIS managing director and head of the composting/fermentation division.

The bogus argument of capacity constraints has been used in Germany by many to apply for the right to set up temporary stockpiles – and these applications have been approved. These stockpiles already contain several million tonnes of waste. A development which Sigmar Gabriel, Federal Minister of the Environment, sharply criticised during a recent discussion with the Bundesverband der Deutschen Entsorgungswirtschaft e.V. (BDE / Federal Association of the German Waste Management Industry): the lack of treatment capacities available is being used more and more as an excuse to apply for the right to stockpile waste temporarily and deposit the material there at a low price. Mr Gabriel insisted, “The TAsi must be fully implemented without any ifs or buts.”

An end to the discussion is in sight as the situation on the German market has eased considerably. New WIPs are being built and existing plants are being extended – the market will soon be more than saturated. Experts are predicting an overcapacity for 2008 (see chart). Dr Ansgar Fendel, managing director for plant construction at REMONDIS believes, “The large number of planned power stations fired by substitute fuel, the capacity increases at WIPs and the measures being undertaken to take the pressure off the capacity available such as introducing food waste bins throughout the country shall result in there being a large overcapacity within 2 to 4 years. If only half the planned projects are completed, the market will still be saturated.” *(dartsch)*



There shall already be an overcapacity at WIPs in Germany in 2008

Court ruling

Demand for fair competition

TIGHTENING UP OF THE LAW ON AWARDING CONTRACTS

In a recent ruling, the Naumburg Intermediate Court of Appeals has further restricted the scope available to municipalities when awarding contracts.

It has ruled that the transferral of a public task to another public contractor represents a task which is subject to the contract award regulations if the service(s) is to be carried out for a fee. The actual case looked at by the court involved an administrative district which wanted to transfer its waste disposal tasks to another administrative district. The Intermediate Court of Appeals ruled: as the administrative district taking over the tasks acts on the market like a private company, the transferral of the tasks is subject to the contract award regulations – and so must be put out for tender. This law has been tightened in several cases in

the recent past. The branch is, therefore, waiting for the EU regulations concerning this matter with great interest as these shall play a decisive role in the national laws of the individual member states. Legal experts are assuming that Brussels shall not follow the demands of major municipal associations to make inter-municipal cooperation work exempt from this law.

Egbert Tölle, board member of REMONDIS said, "An exemption would be a step in the wrong direction. The overall goal must be to achieve fair competition. This can only be achieved if all tasks are put out for tender. Municipal service providers must face competition just as private companies are forced to do." *(dartsch)*

Award

Honorary Polish title for Norbert Rethmann



Norbert Rethmann, Chairman of the Supervisory Board of RETHMANN AG & Co. KG

The Chamber of Industry and Commerce of Foreign Investors in Poland has awarded Norbert Rethmann, Chairman of the Supervisory Board of RETHMANN AG & Co. KG, with an honorary membership.

The members of the general meeting have awarded this title to Norbert Rethmann in recognition of his services for the Chamber as well as of his active presence in Poland. Thanks to his "huge commitment", Norbert Rethmann has pushed forward international economic cooperation work and so played an important role in bringing Poland and Germany closer together. *(plywaczyk)*



Countdown

Starting signal for EKO-PUNKT in Germany

REMONDIS is active in many European countries under the name EKO-PUNKT collecting and processing transport and sales packaging. EKO-PUNKT is now to start up activities in Germany, too. At the beginning of the year, REMONDIS took over the Cologne-based company, Contwin GmbH, and has changed its name to EKO-PUNKT GmbH. Through this

takeover, REMONDIS has given itself the option of being able to set up a national take-back system for packaging materials. EKO-PUNKT is already a well-known name in Poland, Hungary, Great Britain, the Czech Republic and Slovakia. *(dartsch)*



Service

Remondis at the IFAT in China



This year, the IFAT trade fair is being held in China for the second time. Exhibitors from all over the world – including REMONDIS – shall be presenting their products and services at the Shanghai New International Expo Centre from 27th to 30th June.



The IFAT China is a comprehensive specialist trade fair for practical solutions within the areas of water supply, wastewater and waste disposal, recycling, air pollution control, environmental technology and alternative forms of energy. In 2004, approximately 9,500 visitors from almost 70 nations travelled to the IFAT China where 253 exhibitors from 17 countries were presenting their businesses. *(kersting)*



“The costs are much higher here than in other countries because of a lack of competition on the water market and because many companies are not big enough to act efficiently.” Dr Mark Oelmann

Research

Top quality for excessive prices

DR MARK OELMANN: “THE WATER SEGMENT MUST HEAD IN NEW DIRECTIONS.”

The German water management sector is famous in Europe for two things: for its quality – and for its high costs. The question for the future is, therefore: How can the costs for supplying drinking water and treating wastewater be lowered without the quality of the product suffering? The key demands of Dr Mark Oelmann, economist and author, are: more competition, more incentives, more transparency. In the following article, REMONDIS aktuell presents his recipe for success.

Great care should be taken when comparing the water management sectors in different countries. Dr Mark Oelmann is very aware of this. He says, “No concept can be transferred on a 1:1 basis onto the German market.” Despite this, it is worth taking a look beyond the German borders.

Dr Oelmann has compared the German water management sector with the Dutch, English and French models. The result of these investigations have been: “We must head in new directions in Germany. We must create new incentives for innovations. We need more competition. And we must optimize our benchmarking system.” If not, he believes, the future is not good for the German water management sector: “Billions of euros must be invested over the next few years. How shall the municipalities with their tight budgets be able to find the necessary resources? It is not possible to increase fees and prices indefinitely. If the market does not change, then a decrease in quality is inevitable.”

THE CURRENT SITUATION

There are just under 15,000 companies in Germany supplying water and treating wastewater – the result of legal regulations stipulating municipal responsibilities. “Most of the businesses are too small to be run efficiently,” suggests Dr Oelmann. The time is ripe to create incentives to merge businesses: “Many areas, such as legal advice or plant maintenance, should be run by higher units,” he demands. At the same time, the know-how of private service providers should be used more: “Considering the decrease in population in Germany, it is important for more targeted investments to be made. Put succinctly: not every farm must be connected to the public network for the next one hundred years.”

PRIVATISATION

Experience in other branches such as the electricity or telecommunications branches has shown that a liberalisation of the market leads to lower prices and better service. →

One cubic metre of drinking water in Germany costs, on average, 1.83 euros. In the USA it costs only 0.49 euros, in France 1.15 euros and in Great Britain 1.24 euros.



Germany is one of the countries with the highest prices for drinking water

“Each municipality with its own water company. This idea is uneconomical and no longer in keeping with the times.”

Dr Mark Oelmann

- The water market is, however, a special case as so-called ‘transmission competition’ is technically not possible in this sector: the quality of raw water changes if it is transported over long distances or if different kinds of water with different compositions are mixed together. “Transporting water over long distances would also be absurd from an economic point of view because it would be too expensive,” Dr Oelmann argues. So, despite having the same goals, the competition in the water sector must be structured differently to the competition on the electricity, gas and telephone markets.

AN INTERNATIONAL COMPARISON

How then can greater competition be combined with a high standard of quality regulation procedures? Ideas from abroad: competition has been achieved in France by using invitations to tender. The privatisation of businesses and the

foundation of Public Private Partnerships (PPP) are the most common ways used within the water management sector there. When assessing the invitations to tender, importance is also given to the quality of the service such as customer friendliness and environmental protection. Dr Oelmann’s opinion is: “This model is definitely better than the current situation in Germany.” He predicts that there shall also be a trend towards PPPs in Germany. “And this is good – as many successful models have shown.”

The water market in England and Wales has been in private hands since 1989 and this includes investments, too. Since then, investments have doubled and has, per capita, reached the level in Germany. The comparative competition is controlled by several groups, namely the regulatory, environmental and drinking water authorities. The work carried out by the 22 companies involved are monitored, compared

“Whilst in France there are only four companies supplying drinking water, there are around 6,700 – mostly municipal – businesses here in Germany. Besides these, there are also the 8,000 companies involved in wastewater treatment. This structure is extremely uneconomical and expensive for the consumers. Experts believe the potential for increasing efficiency lies between 10 and 40% with quality remaining at the same level.” Andreas Bankamp, managing director of REMONDIS Aqua

and questioned through benchmarking. “The benchmarking system in England and Wales is more comprehensive and better thought out than our benchmarking in Germany,” Dr Oelmann believes. It cannot be used for the current German situation, however, as it is too complex.

A much simpler procedure is used in the Netherlands and, as in England and Wales, it is obligatory for the companies to take part. Select data from the companies is published on the Internet. “The citizens are able to compare the work of the businesses through the benchmarking data. It has proven to be a great success in the Netherlands. As one fact cannot be denied: the incentive to work efficiently is particularly great when the efforts made are in the public eye.”

LEARNING FROM ABROAD

Dr Mark Oelmann has come to the following conclusions: “Germany can learn a great deal from England, France and

the Netherlands. A combination of competition through invitations to tender and comparative, transparent benchmarking is conceivable.” The existing benchmarking system in Germany is not convincing despite the good plants:

“There is no obligation to take part; conclusions cannot be made about individual companies because of the aggregative data. In addition to this, benchmarking need not be limited to simply comparing ex ante defined operative procedures.” The system must be revised very quickly in order to be convincing throughout Europe. The EU’s Green Paper on PPPs is leaning more towards competition through invitations to tender and less towards benchmarking.

“Although a comprehensive and transparent benchmarking system would indeed be suitable to increase the efficiency of water supply and wastewater treatment companies and at the same time ensure quality remains at the same high level.” (dartsch)

SHORT PROFILE

Dr Mark Oelmann is an expert for all questions concerning the water management sector at ‘wik’ (Institute for Infrastructure and Communication Services) in Bad Honnef. The institute follows the moves towards deregulation and liberalization in network industries. Before taking on this position, Dr Oelmann worked at the Deutsche Bank within investment banking as well as at the University of Cologne where he worked for Prof. Juergen Donges, an economics expert, and where he was awarded his PhD.



Dr Mark Oelmann, author and expert in water resources management

“Zur Neuausrichtung der Preis- und Qualitätsregulierung in der deutschen Wasserwirtschaft” (Restructuring price and quality regulations within the German economy)



Kölner Wissenschaftsverlag,
January 2005

Privatisation on the water resources market

REMONDIS AQUA AND ITS INNOVATIVE & EXEMPLARY PROJECT

The demographic changes in Germany shall mean that water consumption will fall over the next few years. This sounds positive but it is actually a great challenge for those supplying drinking water and treating wastewater – especially in rural areas. Politicians, authorities and those active in the economy must face up to this challenge and come up with innovative solutions: the infrastructure must be adapted to the changing consumption pattern in order to achieve a sustainable structure within the water sector.

The Lausitz example: this region in the east of Germany used to be a major mining area for brown coal resulting in it undergoing a very rapid economic development and enjoying a strong growth in population. The infrastructure was continuously extended at a steady rate. However, ten years ago the last coal was mined at Senftenberg and since then the situation has been deteriorating. The region now has a high rate of unemployment, many people are moving away, the average age of the population is getting older and the birth rate is getting lower. Since the year 2000, the population has dropped by ten percent. An end to this negative development is not in sight.

This development has had a very great effect on the water supply and wastewater treatment infrastructure. The demand for water is way below the operative capability of the water works – even during the hottest months of the year. Longer retention time in the drinking water pipes

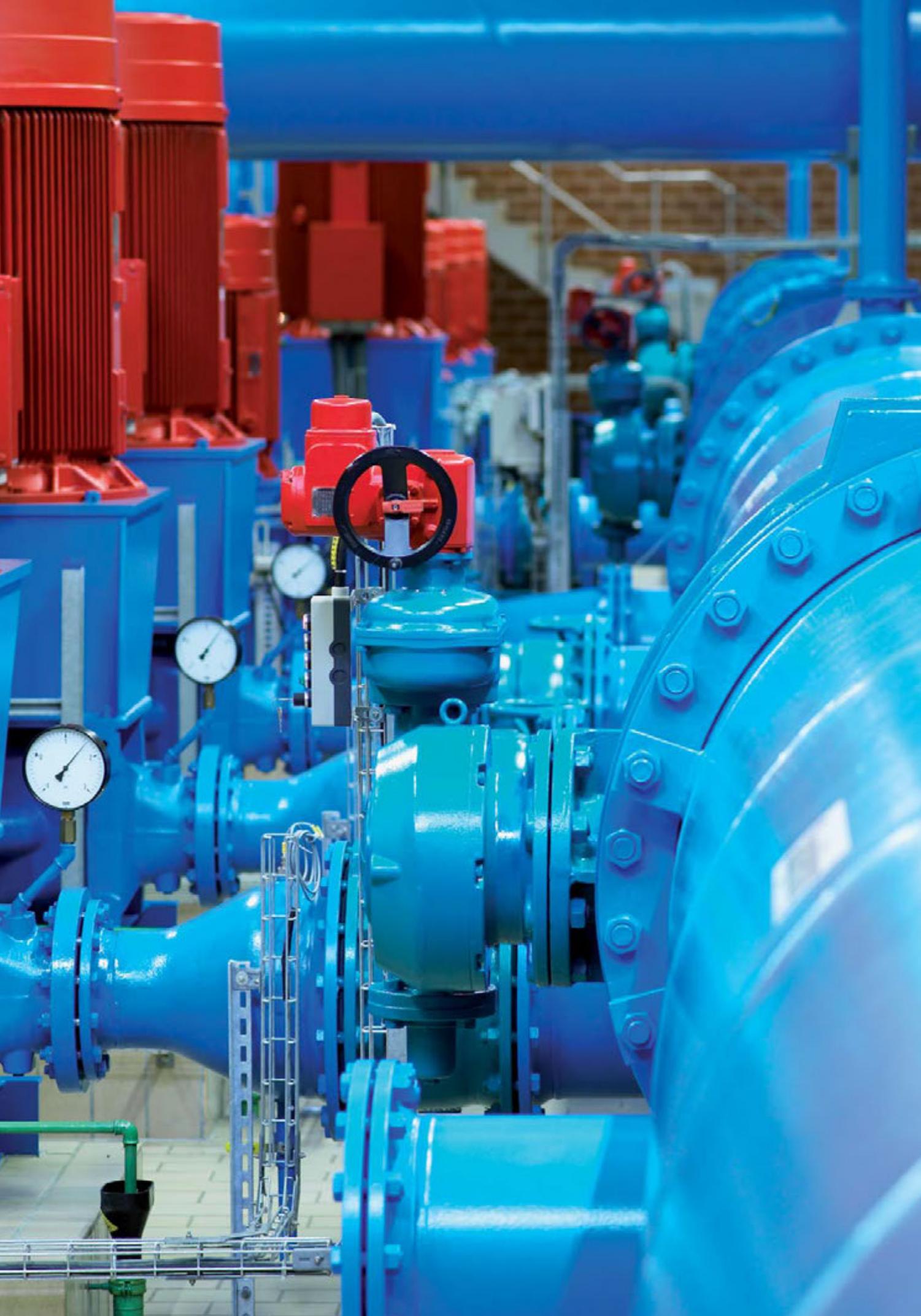
can have a negative effect on the quality of the product. A large amount of the sewage works are working well below capacity and the sewage canals are in danger of clogging up because of the low flow rate. This all means high costs. In addition to this, the number of people paying fees is continuously decreasing whilst the supply and treatment costs remain practically at the same level.

The Lausitz Water Association, which covers 25 towns and districts, recognized this problem and reacted in good time. At the beginning of 2006, it fully privatised both the technical and business side of its plants, having previously put out a Europe-wide invitation to tender, in order to ensure that the region has a functionable and low cost water infrastructure on a long term basis. REMONDIS Aqua founded a plant management business (Ltd) in Senftenberg which has taken over the whole of the Association's daily operative business – from maintaining the technical equipment to purchasing →

“As a private partner, we are able to reduce the workload of the municipalities and municipal associations and take over some of the risks involved in water management. They profit from our extensive knowledge and our economic structures.”

Ludger Rethmann, Board Spokesman at REMONDIS





activities to quality assurance work. The Water Association continues to be the owner of all the supply and treatment plants. The Association also remains the sole decision maker when it comes to charges and investments. The workforce has been completely taken over. REMONDIS' concept is targeted towards growth. The new plant management company is planning to become active way beyond the Association's borders and to offer its services from Senftenberg throughout the whole of Saxony.

"We cannot stay the way we are, when everything around us is changing." Dr Roland Socher, Head of the Water Association

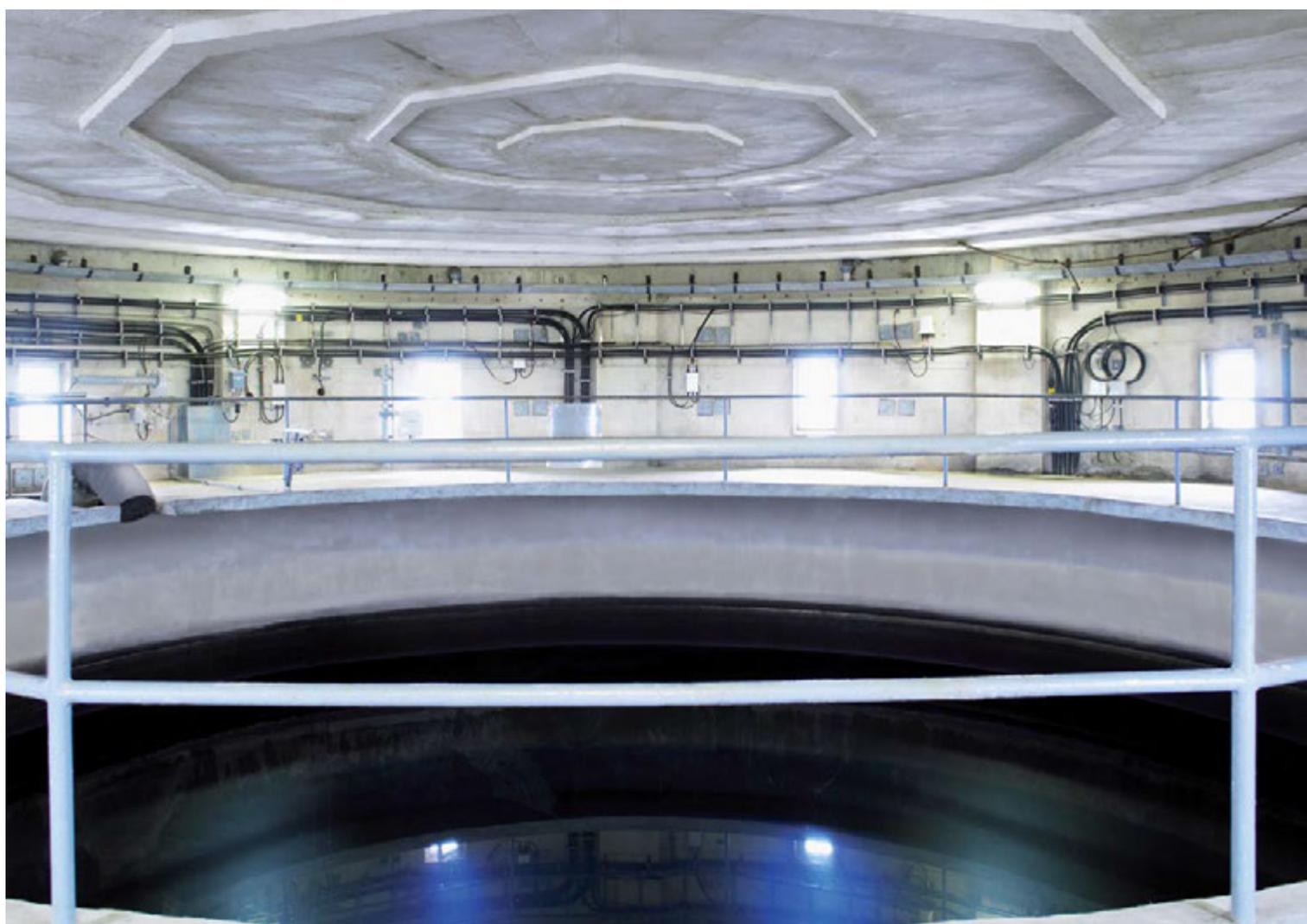
By expanding the business, REMONDIS shall be in a position to work more economically than the Association was able to do with its old structure. The services it offers range from classic water supply and wastewater treatment to environmental analysis work and IT solutions for municipali-

ties. Roland Ruscheweyh, a member of the management at REMONDIS Aqua said, "We have decades of experience of municipal and industrial water management and shall use our know-how in Senftenberg in keeping with the market and our goals."

Those responsible for this sector in other regions of Germany must also face the effects that the decrease in population and the increase in the percentage of old people are having on the water infrastructure. According to a recent study carried out by the Bertelsmann Stiftung (www.wegweiserdemographie.de), the eastern and central regions of Germany have been most affected by the decrease in population. Population numbers have fallen by more than ten percent in many municipalities. Rural areas and industrial sites in the west of the country, however, are also feeling the effects: according to the study, the population in the City of Duisburg shall fall from over 500,000 to around 450,000 inhabitants over the next 15 years. *(dartsch)*

THE LAUSITZ WATER ASSOCIATION

25 towns and districts belong to the Lausitz Water Association. The area served by the Association covers around 800 square kilometres. The Association, which was established in 1992, supplies just under 100,000 inhabitants with drinking water. 65,000 citizens are connected to the wastewater network. The Tettau Water Works, one of the largest and most modern water works in the new German states, belongs to the Association as well as six sewage treatment plants, 1,400 kilometres of drinking water pipes and 270 kilometres of sewage canals.



Clear majority for a private partner

REMONDIS aktuell spoke to Siegurd Heinze, Chairman of the Water Association and mayor of the City of Schipkau.

REMONDIS aktuell: Mr Heinze, the Lausitz Water Association chose to privatize its business management operations. Why?

Siegurd Heinze: The aim of the Water Association was and is to keep the fees at a stable level, to provide its customers with a good service and to work with high technical standards. We decided: if these targets can be achieved more easily with a private company as our partner rather than by ourselves, then we should take this step. We first considered the subject of privatisation in 1999 when we were forced to increase our prices because the Association's business results were unbalanced due to high modernization and investment costs.

REMONDIS aktuell: The result of the vote held by the Association whether or not to privatize showed a clear majority with 97% in favour. To begin with, there had been a number of people against this privatization idea. How were you able to change their minds?

Siegurd Heinze: By asking them a simple question: what would happen, if everything remained the way it was. Lausitz is a rural region undergoing a decrease in population. We would have had to further increase the



Siegurd Heinze, Board Chairman of the Lausitz Water Association

fees and it would have been very difficult for us to achieve the performance level of a private water management business.

REMONDIS aktuell: What effect shall this change have on the workforce?

Siegurd Heinze: By deciding to privatize the plant management operations, we also chose to further development the location – and so safeguard jobs. Our employees are highly motivated and looking forward to mastering this challenge.

This interview was held by Katja Dartsch

Saving money with a database



Geographic information systems (GIS): these are systems which are often to be found in environmental and regional planning work. REMONDIS Aqua provides municipalities and associations with support in the area of collecting and linking data as well as with GIS-based investment management. A recent example: the City of Heringen/Werra in Hessen is renovating and modernizing its canal network. The calculation of the financial contributions, which the users of the ailing canal network will have to pay towards the renovation work, must be both exact and transparent. Extensive data management work using GIS is required here and the City has commissioned REMONDIS Aqua to carry out this work. For the calculation process, the relevant areas must be determined through aerial photography and real estate maps and then linked to all the relevant data such as the position and state of the canals and hydraulic structures or sealing areas. This enables the exact contribution per square metre to be calculated which is then logical and comprehensible for the fee payer. *(ronge-leiding)*

Privatisation bears first fruit

The citizens in the City of Gemünden have a reason to be happy: wastewater charges in their town have fallen by 21 percent. "The tie between the Gemünden municipal company and REMONDIS Aqua has borne its first fruit," was the comment made in the local press about the decrease in charges. REMONDIS has been responsible for operating the city's sewage treatment plant since the beginning of 2005 as well as for managing the finances and investments. Thomas Schiebel, mayor of the city, was quoted in the Main-Post newspaper as saying, "The business has been run very economically." *(dartsch)*



WEEE Act

On time for the system's launch in Germany

REMONDIS OPENS UP THE LARGEST AND MOST MODERN DISMANTLING CENTRE IN EUROPE

Very few markets experience such rapid changes as the market for electrical and electronic equipment. This development has been encouraged by the ever increasing number of innovations and products on this market. Sales have shot up – and the number of waste products have, too. Around 7 million tonnes of waste electrical and electronic equipment (WEEE) are produced each year across Europe – in Germany alone the figure is put at 1.1 million tonnes. Since the end of March, a new law, the 'ElektroG', has been ensuring that resources are being saved and that fewer harmful substances are being released into the atmosphere.

“Germany is making the running for the others with its ElektroG. The EU directives shall be implemented in all member states although it is only happening very slowly. Great Britain, Malta and, to a certain extent, France have to date not yet succeeded in adopting the directives and passing relevant national laws.”

Karl-Heinz Florenz, member of the European Parliament



REMONDIS Electrorecycling is active throughout Europe

As a result of the WEEE Act, all citizens are now obliged to hand in their waste electrical and electronic equipment to their local collection centres and exceptions are not allowed. For this reason all new pieces of equipment have a symbol printed on them of a bin with a cross through it. Manufacturers and importers are now responsible for carrying the costs for collecting, sorting and processing the WEEE. Consumers are able to hand in their waste equipment free of charge.

REMONDIS put its new WEEE dismantling centre in Lünen into operation just in time to coincide with the start of this new law. It is the largest and most modern dismantling centre in Europe. Up to 80,000 tonnes of WEEE can be processed each year in the large halls which cover 5,500m² - from electrical toothbrushes to TV sets and refrigerators. The plant can be extended at any time. More than 300 guests from Germany and abroad travelled to Lünen to witness the official opening of the plant and join in the celebrations. Egbert Tölle, a board member at REMONDIS, got to the heart of the matter: “We have invested large sums of money over the last few years and are now in a position to be able to offer our services throughout the whole of Europe – from logistics, to processing, to recycling the recovered raw materials. The new dismantling centre is not only unique in Europe because of its size and capacity but also because of the large range of processing facilities. At our site in Lünen, we are able to process all categories of WEEE using state-of-the-art technology.”

With its WEEE Act, Germany has adopted and implemented two directives passed by the European Union: the WEEE directive and the directive restricting the use of certain dangerous substances in electrical and electronic equipment. These two EU directives have laid the foundation stone for avoiding and processing WEEE and increased the responsibility of producers and importers. From an ecological point of view, this is a great step forward:

- in the future, producers and importers must pay more attention to how environmentally compatible the substances they use are.
- harmful substances in WEEE such as lead, cadmium, CFCs and mercury must be disposed of in accordance with good professional practice
- any raw materials contained in the WEEE must be recovered. →



During the official opening of the dismantling centre in Lünen, the guests were able to see how the raw materials are recovered from the WEEE. When processing small

“We chose REMONDIS to be our partner because REMONDIS has many years of experience in dismantling WEEE as well as in logistics – across the whole of Europe.”

Dr Peter Böhm, head of the WEEE take-back and recycling division at BSH Bosch und Siemens Hausgeräte

electrical and electronic appliances, for example, high-tech equipment is used to break down the material in size and then sort the broken pieces using, among other techniques, vibration technology, overband magnets, induction separators and separating benches. At the end of the separating process, the fractions, separated according to type, are stored in large containers: copper, aluminium, metal containing iron, plastics and other raw materials which can be marketed throughout the world. Besides small pieces of WEEE, all other categories of waste electrical and electronic equipment can be processed at Lünen. The dismantling centre has, among others, equipment to dismantle visual display units, to process cooling appliances, to process oil-heating appliances as well as to separate picture tubes. Top priority is always given to recycling the recovered raw materials.



REMONDIS has invested 17 million euros in its dismantling centre. 110 people shall be employed here in the future. It is REMONDIS' fifth dismantling centre in Germany. REMONDIS is also currently building modern dismantling centres in Poland and Hungary. A new centre in the Polish City of Lodz shall be put into operation by REMONDIS this year. REMONDIS Electrorecycling is active in many European countries. Internationally active customers, such as Hitachi Europe, Fujitsu Siemens, BSH Bosch und Siemens Hausgeräte, Philips and Gericom attach great importance to international solutions as the individual national laws differ greatly from one another. And whilst countries such as Poland, Germany and Switzerland have already implemented the EU directives, others have only just begun discussing them. *(dartsch)*

“The EU directives shall prevent harmful substances from WEEE such as lead, cadmium or mercury from seeping into the earth or ground water. At the same time valuable raw materials shall be recovered.”

Karl-Heinz Florenz, member of the European Parliament



An interview with Gerhard Jokic, managing director of REMONDIS Electrorecycling, about the implementation of the WEEE Act in Germany.

REMONDIS aktuell: Mr Jokic, on 24 March, it became obligatory for waste electrical & electronic equipment to be taken back in Germany. How have the last few weeks been?

Gerhard Jokic: The process of taking back WEEE has begun without any major problems although the German take-back model is still immature and extremely complicated. It has set off a really chaotic situation.

REMONDIS aktuell: To what extent?

Gerhard Jokic: The market is overregulated in Germany. In other countries, collective take-back systems have been implemented which are far more practical but which were not approved by the Federal Cartel Office.

REMONDIS aktuell: Could you give a brief description of the German model?

Gerhard Jokic: When a container is full and must be collected, then the municipality informs EAR (Used Electronic Appliances Register) of this. EAR is an organization set up by the industry to coordinate the collection of the equipment. By calculating the market share of each manufacturer, EAR works out which company is responsible for collecting the waste equipment and informs the manufacturer and the recycling company of this. The decision, which company must collect the container and which company must replace it with a new one, must be made for each



Gerhard Jokic, managing director of REMONDIS Electrorecycling

individual case. The result is that different orders come in each day – a huge challenge for the logistics divisions.

REMONDIS aktuell: That means that company A delivers an empty container which is then collected by company B?

Gerhard Jokic: Exactly. A container is never collected by the same company which brought it to the collection cen-

“The system is hardly practical.”

tre. Not all the companies, however, use compatible hook and chain systems. Not every container, therefore, is able to be hooked up. Subcontractors must be found within a very short period of time to transfer the waste equipment into another container. If the work is not completed within 48 hours then EAR issues an official warning. Put briefly: the system is uneconomical and hardly practical. We can only hope that it will be altered very soon and that the so-called ‘rag rug model’ is implemented in which one company is made responsible for certain regions.

This interview was held by Katja Dartsch



from right to left: Prof. Wolfgang Böhmer, Minister President, Egbert Tölle, REMONDIS board member, and Ulrich Eichhorn, managing director of the soda works, at the laying of the foundation stone

Generating energy

Alternatives to fossil fuels

NEW TREATMENT PLANT TO PRODUCE ELECTRICITY AND STEAM FOR THE INDUSTRY

For some years now, REMONDIS has been increasing its commitments on the market for regenerative energy – on the one hand as a supplier of alternative fuels and, on the other hand, as an operator of power stations. The foundation stone for a new thermal treatment plant has now been laid in Staßfurt in the German state of Saxony-Anhalt.

REMONDIS is investing around 150 million euros in the new incineration plant. Approximately 110 new long-term jobs shall be created once the plant is put into operation, which is planned for the end of 2007. 300,000 tonnes of municipal waste and commercial waste similar to household waste shall be processed at the plant each year. In March, 260 representatives from the world of politics, including Prof. Wolfgang Böhmer, Minister President of the State of Saxony-Anhalt, and the economy as well as from the field of science travelled to the site for the official laying of the foundation stone. Professor Böhmer was pleased to see the good cooperation work between REMONDIS and the neighbouring soda works and praised it saying, "This is proof that the economy and ecology can be successfully united." The soda works shall use the energy generated by

the incineration process to produce heavy and fine soda ash for the glass industry, the production of washing powder as well as for the chemical industry. REMONDIS shall be supplying the soda works with process steam and electricity generated from steam – 360,000 megawatt hours of steam and 73,000 megawatt hours of electricity a year. This means that the processing plant shall contribute towards conserving fossil fuels such as oil and gas. "With this new processing plant in Staßfurt, we are continuing to extend our commitment within the energy sector," said Egbert Tölle, a board member at REMONDIS, "The whole of the REMONDIS Group, including the planned projects, produce a total of over two million megawatt hours of electricity, steam and heat energy – both for our own production processes as well as for the free market."

"The cooperation work between REMONDIS and the soda works is proof of how business locations can develop from each other – an exemplary model for how we would like to, must and can solve the problems for the future ."

Prof. Wolfgang Böhmer, Minister President of the State of Saxony-Anhalt.

State-of-the-art incineration technology

AN INTERVIEW WITH PROF. MÜLLER, AN EXPERT IN THERMAL TREATMENT PLANTS

REMONDIS aktuell: Professor Müller, being an expert you know all about the technology used in thermal treatment plants. The new REMONDIS plant in Saxony-Anhalt (see p. 22) is to be run using the principle of a stoker firing system. What is your opinion of this technology?

Prof. Hermann Müller: The plant shall correspond with the latest technological standards. The stoker firing system is the most tried and tested and proven process available. What is also positive is that the energy generated by the incineration process shall be used directly. This site can be said to be ideal because of this immediate energetic recovery and supply to the industry.

REMONDIS aktuell: How has the thermal treatment of waste developed over the last decades?

Prof. Hermann Müller: When the first waste incineration plant was built around 1900 in Hamburg, no-one thought about emissions or carrying out emission controls – dioxins were still unheard of. Public awareness did not change until the end of the 70s and the beginning of the 80s. Since then, intensive research work has been carried out and the incineration processes constantly improved. The existing plants are always kept at the latest technological standards. Today, emissions from these plants are minimal.

REMONDIS aktuell: What substances are released into the atmosphere by the incineration processes?

Prof. Hermann Müller: The main substances are nitrogen, water vapour, CO₂ and residual oxygen. Dioxins which are formed as a result of carbonization are for the most part destroyed again through a rapid cooling process in the boiler. The emission limit lies at 0.1 nanogramms per cubic metre of flue gas. This concentration is the equivalent to one sugar cube in Lake Constance. The 17th Ordinance of the Federal Emissions Control Act (17. BImSchV) is the world's strictest law in this sector. And thermal treatment plants in Germany lie well below this emission limit.

REMONDIS aktuell: Who controls whether the emission limit is kept to or not?



SHORT PROFILE

Professor Hermann Müller (56) is head of the course on thermal waste treatment and the circular-flow economy at the College of Further Education in Magdeburg-Stendal as well as a certified public expert on thermal waste treatment from the Chamber of Industry and Commerce.

Prof. Hermann Müller: The emissions are monitored continuously. The measuring equipment is sealed and connected online to the relevant authority responsible for monitoring the emissions. The authorities can, therefore, check the emission limits at any time. If there is a sudden unexpected change in the emission data, then the modern measuring and regulation technology automatically sets off an alarm.

REMONDIS aktuell: You've already told us a bit about the history of incineration – what is the future like: will thermal treatment plants still be in keeping with the times in 30 years' time?

Prof. Hermann Müller: Even if more and more raw materials are fed back into the circular-flow economy – and this is something to be applauded – it shall still be true to say that incineration is a process with a future. There are no real alternatives at the moment – the only one being not to produce waste in the first place.

“Incinerating one tonne of residual waste generates 2.3 tonnes of steam. Around 240 kilos of semianthracite coal would be needed to generate this amount of energy with fossil fuels.” Prof. Hermann Müller, expert for thermal waste treatment



The new biomass-fired power station in Lünen



Plant construction work

Waste wood as a source of energy

REMONDIS BUILDS A NEW BIOMASS-FIRED POWER STATION

REMONDIS operates several dozen thermal plants across Europe – from power plants fired by substitute fuels to waste incineration plants. The plants are becoming more and more important as an alternative source of energy: heat energy and steam, so-called by-products, are generated during the incineration process.

REMONDIS is continuing to extend its commitment within the field of alternative energy forms: this autumn a new biomass-fired power station shall be put into operation at its Lünen site which shall, for the most part, be run using waste wood. It shall generate around 20 megawatt hours of electric power which is the equivalent to the electricity consumption of a small town. The first pieces of wood were already put onto the grate in March and the first amount of electricity fed into the public supply mains. The amount of money invested: approximately 60 million euros.

CES-TEC Combustion Engineering, Services and Technology GmbH & Co. KG, a 100% REMONDIS subsidiary, has been overseeing the construction of the new biomass-fired power station from the first draft to it finally being put into operation. The interdisciplinary team - consisting of, among others, civil engineers, electrical engineers and mechanical engineers - has been able to profit from the many decades

of experience which REMONDIS has both at home and abroad in the area of operating and maintaining thermal treatment plants. REMONDIS has already started its next project concerning the construction of a power station. In March, the foundation stone was laid for a thermal treatment plant in Saxony-Anhalt which shall also be used as an energy supplier (see p. 22). *(terhorst/dartsch)*

REMONDIS

REMONDIS operates 36 thermal plants across Europe including:

- waste incineration plants
- biomass-fired power plants
- incineration plants for sewage sludge
- power plants fired by substitute fuels
- plants to incinerate hazardous waste
- landfill gas power plants
- fermentation plants

The energy generated by these plants as a by-product amounts to around 2 million megawatt hours a year and is used for REMONDIS' own production processes or fed into the public mains.



The demand for secondary fuels is rising rapidly

Market research

More in demand than ever before: Raw materials and fuels from waste

CHRISTIAN BÖLLHOFF, MANAGING DIRECTOR OF PROGNOSES AG

The circular-flow economy is undergoing a change. Environmental protection and the conservation of resources are playing an increasingly important role. In what direction will the branch be developing? Christian Böllhoff, managing director of the business consultancy company, Prognos AG, attempts to see into the future.

REMONDIS aktuell: Mr Böllhoff, your institute has looked at the development of the circular-flow economy in great detail. What changes is the branch about to undergo and what factors shall be playing a role in these changes?

Christian Böllhoff: On the one hand, the legal frameworks in the EU such as the new Waste Framework Directive and the EU's strategy to prevent and recycle waste shall give the branch a new momentum. On top of these, there are also the packaging ordinance, the WEEE Act and the ordinance on commercial waste in Germany – all these measures shall reveal new directions but also new obligations which shall encourage and promote the conservation of resources. On the other hand, the national and interna-

tional market and price situation will create dynamism in the market for recyclable materials.

REMONDIS aktuell: What effect has the globalisation of the market had on the products in the branch?

Prognos AG

Founded in Basel, Prognos AG has been advising decision makers in the world of politics and business since 1959. Using interdisciplinary analyses and forecasts, these business consultants develop recommendations and strategies providing an orientation for important future issues. More information can be found at www.prognos.com.

“The implementation of the TAsi shall go down in the history of the German circular-flow economy as being an important turning point.”

Christian Böllhoff: There has been a massive increase in demand for secondary raw materials on the global market over the last few years. A large part of the recyclable materials collected in Germany, such as paper, plastics and metals, are already being marketed abroad as raw material for production processes. This growth shall continue to increase because of the incredibly high demand for raw materials and resources – especially in China and the other Asian countries. In addition to this, the trade in secondary raw materials and fuels will intensify within Europe. National borders will become less and less important.

REMONDIS aktuell: You mentioned fuels: how exactly will this market segment develop?

Christian Böllhoff: In 2003/2004, only 2 to 3 percent of the 30 million tonnes of municipal and commercial waste produced in Germany and designated to be pre-treated was used to produce energy as a substitute or secondary fuel. Over the next two to three years, this amount shall increase to at least 20 to 25 percent. To achieve this – besides the additional recycling capacity through part incineration in cement works and coal-fired power plants – new power plants fired by substitute fuels must be built with the industry using the energy generated. Many investors are already in the process of carrying out this work.

REMONDIS aktuell: The trend in Europe is towards conscientiously processing and recycling valuable substances. Which areas should be improved to be well prepared for the future?

Christian Böllhoff: Germany holds a leading position in Europe. This is true for both its existing plant technology and infrastructure as well as for its waste management framework conditions and technical potentials. Companies must, however, try even more to tie in their technical know-

how with their operative business processes. Innovative technology must be developed quickly to pre-treat waste: something which was impossible only a few months ago because of the tendency of the branch to use landfills. Europe needs modern circular-flow businesses with innovative ideas and strategies which see it as their duty to save resources.

REMONDIS aktuell: Thank you for the interview!

This interview was held by Katja Dartsch



CHRISTIAN BÖLLHOFF, MANAGING DIRECTOR OF PROGNOSES AG

Christian Böllhoff, born in 1964, runs Prognos AG. After working for the Treuhandanstalt privatization agency and Bosch-Siemens-Hausgeräte, he moved to Gemini-Consulting in 1996 where he was responsible for business strategy and the Berlin-based office. In 2000, Christian Böllhoff took over the position of managing director of the 'Handelsblatt' within the Georg von Holtzbrink publishing house until the end of 2003 when he was appointed managing director of Prognos AG.

Services for retailers

The CentrO challenge

IN EUROPE'S LARGEST SHOPPING AND LEISURE CENTRE EVEN CLOTHES HANGERS ARE COLLECTED SEPARATELY

Europe's largest leisure and shopping centre, CentrO, is located on the old Thyssen site in Oberhausen. Each year, 23 million people visit the shopping mall which is next to the highly visible gasometer. Just under 200 shops, a great selection of restaurants and various leisure facilities attract visitors from near and far.

A shopping centre of this size presents both a logistical and organizational challenge – and this is true for the circular-flow economy, too. Each year, around 2,500 tonnes of recyclable waste are produced. "This huge amount of very different materials must be collected, sorted and processed

quickly and reliably," explained Stefan Schömer, project leader at the REMONDIS regional offices in Bochum. REMONDIS and the Wirtschaftsbetriebe Oberhausen have drawn up and implemented an individual waste concept for the centre. Stefan Schömer, branch manager in Recklinghausen commented, "Our concept has been specially created for the shopping centre. We have, for example, extended the possibilities to separate recyclable materials to include plastic film and clothes hangers which are thrown away in large numbers. The recyclable materials are thrown away separately via the ten collection centres which hold containers constructed especially for this purpose. In



addition to this, CentrO has the largest grease separator in Germany.”

Liquid fats from the restaurant and bistro kitchens are drawn off via pipes and then transported in special vehicles to Recklinghausen where they are recycled. The water is removed from the fats and the rest is taken to biogas plants for energetic recovery.

REMONDIS already has great experience in the area of managing waste and recyclable materials at shopping centres. In the Ruhr region alone, it offers similar services to the Ruhrpark in Bochum, the Rhein-Ruhr-Center in Mülheim as well as the Marler Stern. *(dartsch)*



Service for event organisers

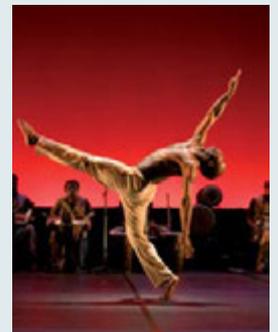
Africa! Africa!

REMONDIS IS ANDRÉ HELLER'S PARTNER FOR HIS CIRCUS SHOW



Bright colours, bewitching scents, rousing music: the circus festival, Africa! Africa!, transports its audience into a spectacular world of senses and emotions. REMONDIS has been commissioned by Deutsche Arena GmbH to manage all the disposal services for André Heller's new show.

André Heller's team travelled around the African continent for almost two years – searching for excellent dancers, acrobats, artistes and musicians. Ghana, Nigeria, Mozambique: at the end of the two years there were 120 men and women from all over Africa standing on the stage to captivate their audience with their highly energetic circus show. The world premiere was held in Frankfurt am Main and received great write-ups. More shows are to follow in Hamburg, Munich, Berlin and Düsseldorf.



The African circus has commissioned REMONDIS to collect and process recyclable materials to ensure that everything goes as smoothly behind the stage as it does on the stage itself. REMONDIS collects the wood, paper and metal waste from the mobile workshops and sets up presses for recyclable materials, glass containers as well as containers for kitchen waste. Bernd Lukas, technical manager of the show, commented, "REMONDIS has a national set-up and provides a reliable service no matter what the volume of material is. This is particularly important for a business like ours as we have to change location every two months and need a competent partner for waste disposal and recycling no matter where we are." *(dartsch)*



Budapest: the financial and business capital of Eastern Europe

Hungary

Secure data

REMONDIS DATA OFFICE EXPANDS WITHIN EASTERN EUROPE

REMONDIS DATA Office continues to expand. After this business division, whose core business is destroying information carriers, succeeded in establishing its office services in Poland and the Netherlands, it has now taken the next step and moved into Hungary.

Just recently, the company has become involved in the areas of data security and document management in Hungary. Adopting the EU directives on data security into national law shall also give this sector new momentum. In addition to this is the fact that the mostly Western European banks, insurance companies and large firms have recognized Hungary as being the gateway to the Eastern European and Russian markets and are establishing branches in the country. Budapest has very rapidly become the new financial and business capital of Eastern Europe.

The high quality expectations of western businesses concerning data security and document management have set new standards in the country. Hungary offers, therefore,

a huge growth potential in the sector of office and archive security services. REMONDIS DATA Office opened its first branch in Hungary in February and, to begin with, is offering its service covering the secure destruction of information carriers. Further office services shall gradually be introduced onto the market such as archiving or saving and restoring documents. Jens Kumbrink, managing director, commented, "Thanks to the experience gathered in Poland we are extremely well prepared for launching our services in Hungary."

Within only a few years, DATA has succeeded in becoming the leading service provider in this sector in Poland. *(brauner)*

News in brief

Award-winning cleaning services

Dow Chemical Company has awarded the Buchen Group with its "Supplier Recognition Prize" naming the Group as its best supplier throughout the whole of Europe in 2005. The award was handed over at its site in Terneuzen (Netherlands) where the Buchen Group has also been running a branch for almost a year now. The Buchen Group, which has belonged to REMONDIS since 2004, has been providing

Dow Chemical Company with industrial services for more than 30 years. By using state-of-the-art cleaning technology and introducing various automated processes, the Buchen Group has succeeded in continuously improving its quality and safety standards. Top priority has always been given to finding the best possible technical solutions for the company's clients. *(armdt)*

IKEA and REMONDIS are global partners

In 1926 a young boy was born in Småland Southern Sweden, who proved to have a very good head for business. Even as a small boy he bought large numbers of cheap matchboxes in Stockholm and then sold them in his neighbourhood for a profit. At the age of 17, Ingvar Kamprad founded his own company – IKEA.

Today, this well-known furniture store has 90,000 employees in 44 countries around the world and has an annual turnover of 14.8 billion euros. No matter where the store is – in Europe, Asia or Australia: much importance is

given to protecting the environment and this is true for recycling waste products, too. IKEA works together with REMONDIS in many countries. An employee in Australia had words of praise about the company, "IKEA's

regulations are very strict about what and how much must be recycled.

The guidelines come from the head office in Sweden. The company is very forward-looking in this respect."

For the Rhodes IKEA store in Sydney alone, REMONDIS transported more than 400 tonnes of paper and cardboard, around 350 tonnes of residual waste, approx. 140 tonnes of wood and 10 tonnes of metal to be recycled last year. *(dartsch)*

Drug-smuggling ship at the bottom of the sea

REMONDIS CLEANS UP THE "PONG SU" IN AUSTRALIA

Most people living on the south-east coastline of Australia have heard of the Korean ship, "Pong Su". Three years ago, the police seized large amounts of heroine on the "Pong Su" with a market value of around 122 million euros.

Among the crew, the police found a group belonging to the North Korean Workers' Party which hit the international headlines as it showed that the North Korean government was involved in growing opium and drugs trafficking. The Australian Federal Police decided at that time to sink the

ship close to its shores – that way the ship could never be used again to smuggle drugs. Before the ship could be sunk, however, REMONDIS Liquid Waste had to first fulfil an important task. The "Pong Su" had to be thoroughly cleaned so that there was no danger of it polluting the sea. REMONDIS collected and disposed of almost 2000 tonnes of liquids such as oil, fuel and wastewater. In March 2006, a F-111 fighter jet dropped an 800kg bomb on the "Pong Su". The wreck is now lying at the bottom of the sea. *(beckerhoff)*



The "Pong Su" is now at the bottom of the sea



Employee portrait: silver smelter

Photography as a source of silver

EACH YEAR REMONDIS ARGENTIA RECOVERS 150 TONNES OF THIS PRECIOUS METAL

Ben Lempers loves his job. "The way it shines," he says with amazement in his voice as he lets the silver granulates trickle through his large callused hands. At no time during the 17 years in which the tall Dutchman has been working as a silver smelter has he lost his fascination for this precious metal.



Ben Lempers has been working as a silver smelter at REMONDIS for 17 years

He stands in front of a 1,000 litre water barrel in his shiny protective suit and heavy safety boots. Ben Lempers then pours the hot metal, which has a temperature of almost 1,000°C, from a cup through a sieve into the cold water. There's a sizzling sound and then the silver rapidly changes into a countless number of small balls in the water barrel. It is easier to portion out the granulates, which have a level of purity of 999/1,000, than a heavy bar weighing 30 kilograms.

Ben Lempers began working as a silver smelter at REMONDIS Argentia near Rotterdam when he was 28

years old. "Since then I haven't put on a single gram of weight," the father of two children says proudly. The work of a silver smelter is physically demanding. On top of this, the heat must also be contended with. "In summer, the temperature in front of the furnaces is often around 45°C and the protective suits are also very warm," he explains. The silver which Ben Lempers melts down comes from the photographic industry – from fixing solutions, films and X-ray pictures. This valuable metal is recovered through a complex washing and electrolysis process. As a result, REMONDIS is able to feed around 150 tonnes of silver back onto the market.

Ben Lempers works in one of the largest photographic waste recycling businesses in Europe. He carries up to 700 kilos of silver – either as granulates or as bars – into the vault each day. He is particularly ambitious wanting to achieve the best quality silver possible. An employee needs a great deal of skill and even more experience to be able to achieve a level of purity of 999/1,000. *(dartsch)*

REMONDIS Argentia

REMONDIS Argentia specialises in collecting and removing the silver from photographic chemicals and film materials. The branch, which has been in REMONDIS' hands since 1994, has a workforce of just under 50 employees and has become the market leader in the Netherlands.

"A large part of the recovered silver goes back to the photographic industry. More and more silver is also being used to produce silver solder. Silver solder has replaced soft solder since it became illegal one year ago to use lead in the production of solder." Ulrich Hankeln, managing director of REMONDIS Argentia

Emptying bins with a joystick

MARKUS NEUMANN HAS BEEN WORKING BEHIND THE WHEEL OF A SIDE-LOADER FOR 5 YEARS

The gripper arm positions itself in front of the food waste bin, it grabs hold of it and lifts it up headfirst over the charging hopper. Markus Neumann presses a button and the rubbish falls into the side-loader with a thud. This is the first bin of the day that the 30-year-old has had to empty. Around 1,000 other bins are waiting to be emptied by him in Ascheberg-Herbern in the Münsterland region.

Markus Neumann is an employee at REMONDIS' branch in Selm and his working day starts early. At 6.30 a.m., he collects his vehicle from the company and checks his route. It's pitch-black outside with only the side-loader's orange flashing lights breaking up the darkness a little. The driver's cab smells of coffee and there is a bag of liquorice on the dashboard. Markus Neumann works on his own. The telescoping arm technology which the side-loader uses means that he can carry out the work without help. The gripper arm, which picks up the bins one by one, is controlled via a joystick next to the steering wheel. To have the best possible view of the arm, the driver's seat is on the right side of the cab. A small screen next to the sun visor shows the rubbish falling into the inside of the truck. The left hand is used to control the joystick. "It takes a bit of practice to get used to it," says Mr Neumann. New colleagues normally have to train for several weeks before they can drive the routes by themselves. Markus Neumann believes, "You can either hoist the bins or you can't – you need a certain amount of skill. Stress doesn't help at all. If you are stressed and try to do the work then all you do is knock the bins over. Even if cars are queuing behind you, you must stay calm."

Side-loader trucks have been in the REMONDIS fleet since 1993. Hundreds of these trucks are being used throughout the world by REMONDIS, and the number is continuously growing. Normally, the driver does not need to get out of his cab during his route. The people in Herbern know exactly where to place their bins on the pavement so that the telescopic arm can pick it up – with the tipping edge facing the street.



Markus Neumann drives a side-loader

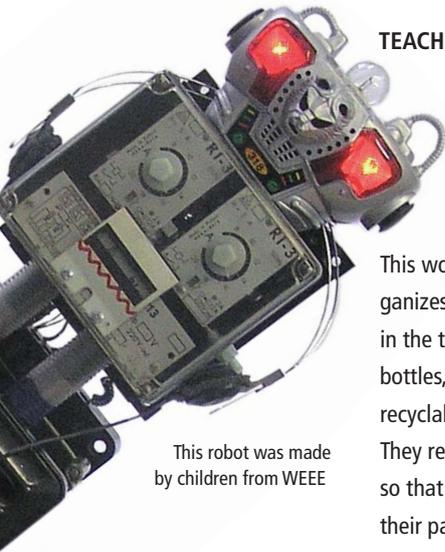
Markus Neumann begins his day's work emptying the bins on the main roads. He wants to get onto the smaller roads before the rush hour starts. Quickly and skilfully he drives towards and picks up each bin one by one. Slowly, dawn begins to break and the first schoolchildren walk by and then stop to stare fascinated by the technology. Whilst their breath shows that it's frosty outside, it's cosy and warm in the driver's cab. At about midday, it is time to drive to the composting plant at Lünen to unload the waste. Markus Neumann has been working for REMONDIS for five years. The soon-to-be father has had an interesting career so far: after leaving school he trained to be a roofer and then learned how to produce paper. His brother Christian, a motor mechanic and also a REMONDIS driver, then persuaded him to apply for a job at REMONDIS. "This is a good job," the 30-year-old says, "Clean, dry – and secure."

(dartsch)

Teaching about the environment

Aliens from Planet WEEE

TEACHING POLAND'S YOUNGEST CITIZENS ABOUT THE ENVIRONMENT



This robot was made by children from WEEE

In Poland, separating waste and recycling are 'in'. Surveys have revealed: Polish citizens want to separate their household waste – but they often do not know how to. REMONDIS has, therefore, been playing an active role teaching about the environment.

This work begins with the youngest citizens: REMONDIS organizes ecological workshops for children and young adults in the town of Posen during the school holidays. Using PET bottles, old clothes and waste paper, the children learn how recyclable materials are collected, processed and recycled. They realize how important it is to separate waste at home so that the raw materials are not wasted. When they tell their parents about their exciting day, about their visit to the sorting plants and their trip on a truck, they automatically pass on what they have learned.

animal protection group. Kindergartens and schools collect waste paper and the money made is donated to the animal rescue home there. This year, the children have collected 70 tonnes of waste paper. The animal rescue home has been able to buy medicine for 180 sick animals from the money made.

Schools in south-east Poland have been taking part in the competition, "Aliens from Planet WEEE" in which REMONDIS is participating. The idea: Aliens from Planet WEEE live on the earth to make our life more comfortable – for example, electric toothbrushes, cassette recorders and washing machines. However, when the "electronic aliens" are no longer of any use, then they can be a problem for the environment if they are not disposed of and recycled correctly. In order to encourage adults to take their WEEE to the collection centres, the children are using their fantasy and electrical & electronic waste equipment to make their own models of what an Alien from Planet WEEE looks like. Some great sculptures have been made and they are being displayed at the large shopping centres in Poland. *(plywaczyk)*

"We recycle at our kindergarten. We collect old newspapers and when we have a huge pile, we take them away." Eva (4 years old)

They proudly show their group photo on which the children are standing on the truck weighbridge to find out how much they weigh all together. In Stettin, REMONDIS organizes the popular waste paper marathon together with an

"Recycling is easy. You make new things from old things. That's all there is to it." Kamil (6 years old)





> Impressions



Resistance is pointless WEEE as a source of raw material

Many million tonnes of WEEE are produced each year across Europe. Such waste equipment contains valuable raw materials such as copper, platinum, aluminium and steel. REMONDIS Electrorecycling recovers these raw materials and feeds them back into the economic cycle.

REMONDIS Electrorecycling has many years' experience of setting up take-back systems both in Germany and abroad. All categories of waste equipment are collected throughout Europe, dismantled in dismantling centres and then processed. REMONDIS operates Europe's most

modern processing and dismantling centres for cooling appliances, screens and picture tubes.

Would you like to learn more about our services? Then please contact us. Our telephone number and e-mail address are listed below.