Advanced Technology – A Key Focus in the Development of the SARIA Group
Dear customers, employees and neighbours and friends of SARIA,

One of the primary objectives of the SARIA Group is to manufacture and market products of the highest quality and to perform our services to the highest possible standard in order to achieve customer satisfaction. Our corporate philosophy also reflects our social responsibility and concern for the environment because, as part of society, we are committed to enhancing the common good as well as helping to conserve natural resources and protect the environment. We do not regard economics and ecology as mutually exclusive: in fact, finding the best way of meeting both requirements is a crucial part of the way we do business. By using advanced processing methods, manufacturing numerous products based on natural raw materials and generating and using biomass, we make a valuable contribution to preserving natural resources.

We clearly set high standards for ourselves, but high standards are important when it comes to achieving good quality results. This issue of SARIAnews is entitled “Advanced technology – A key focus in the development of the SARIA Group” and provides a summary of this core aspect of our work. It is an ongoing investment in state-of-the-art processing facilities and highly efficient logistics systems that enables us to deliver the required quality of products and services.

The work of many managers and employees is crucial to this investment and the day-to-day running of our production and logistics systems. Without effective, systematic management of technology projects, cross-border cooperation, technicians and logistics specialists who share their knowledge, and a constant striving to improve details that have led to many new developments, the SARIA Group would not be where it is today.

This issue of SARIAnews outlines our activities and achievements in the field of technology, introducing the people responsible for these developments and projects and addresses future challenges in the advanced technology field.

We hope you find our articles interesting.

Best wishes

Dr. Kurt Stoffel

Spokesman for the Management Board
Obituary

Dear employees, customers and readers,

We have all been deeply affected and saddened by the sudden death of our chairman, Dr. Hermann Niehues.

Dr. Niehues died as the result of a riding accident on 7 September 2008. Our heartfelt sympathy goes out to his devoted wife Jutta, his daughter Katja and all other members of the Niehues family.

Our family-run company has lost a chairman who helped to develop and shape our business and who held overall management responsibility. For my part, I am truly saddened by the far too early death of a long-standing companion and friend.

Hermann Niehues was born in Münster on 29 March 1947. Having gained his high school leaving certificate, he studied business management at the Westfälische Wilhelms University in Münster and successfully completed his course after writing a thesis at the Institute of Transport Economics, supervised by Professor Hellmut Seidenfus. After gaining his PhD, his professional career began at management consultancy A. T. Kearney in 1976. He was a natural entrepreneur, having grown up in an entrepreneurial family.

I first met Hermann Niehues through the German Association of Young Entrepreneurs (BJU), and at the beginning of 1978. I succeeded in persuading him to join us as managing director of RETHMANN Städtereinigung, which was expanding strongly at the time. With him – and Reinhard Lohmann who joined the company a year later as commercial manager – we put a team in place that enabled us to grow the business quickly.

Being a keen observer of social trends relating to environmental protection, and recognising the resulting demands on the waste management sector, Hermann Niehues was quick to see the challenges that the industry had to face. His clear thinking and analytical skills allowed him to develop appropriate strategies to expand the business, thus creating a sound basis for our mutual discussions and the decisions affecting the company. An incredible bond of mutual trust soon emerged between us. This was based on respect and a personal closeness that went beyond our working relationship.

Hermann Niehues, Reinhard Lohmann and I were able to work together as a management team where ideas were shared, challenged and refined as part of a highly constructive dialogue. Ultimately, our motivation was a management philosophy that has repeatedly proved its worth:
empowering people by giving and expecting personal responsibility, promoting an entrepreneurial mindset and granting the necessary freedom.

I showed back in 1992 just how great my confidence was in Hermann Niehues, in his far-sightedness and strategic skills, when I moved up to become chairman of the supervisory board and handed over managerial responsibility for the RETHMANN Group to Dr. Niehues by appointing him chairman of the management board.

Under his leadership, REMONDIS AG steadily expanded its activities in the water and environmental service sector, SARIA AG became a major player within the sector for recycling slaughter products and rendering, and RHENUS AG grew into a leading company within the logistics industry. Up to his death, Hermann Niehues was responsible for our family-owned company with its 36,000 employees and an annual turnover of 7.2 billion euros.

Mention should also be made of the active role he played in numerous associations, specialist bodies and committees, as well as his voluntary work. He was deputy president of the Society for the Promotion of Olympic Equestrian Sports (FORS), for example. Passionately fond of riding since childhood, in 1990 he became a member of the German eventing squad. Between 1997 and 2001, he sat on the eventing committee of the German Olympic Riding Association (DOKR). He remained closely involved with FORS for many years, and following the death of Dr. Reiner Klimke in 1999 became deputy president of the society. He also made a significant contribution as vice president of the Federation of the German Waste Management Industry, helping to support and promote the development of the environmental services sector. He had a profound impact on the way the industry was and is perceived by both the public and industry representatives. During the past few years, he took a special interest in the development of our logistics subsidiary, RHENUS AG. He became responsible for transport policy on the Christian Democrat party’s Business Committee and actively supported the academic community by sitting on committees at the universities of Münster, Leipzig and Hamburg. In addition, he was a supporter of the Westphalian Heart Foundation.

Our corporate family keenly feels the huge gap left behind by the death of this talented, distinguished, internationally highly respected man with his impeccable judgement, who enriched my private and professional life for 30 years. It is hard to imagine how great the loss must be for his wife Jutta, his daughter Katja and for the rest of his family. Our thoughts are with them.

The RETHMANN group of companies and its many employees will never forget him and I will certainly always remember him with gratitude and respect.

Yours
Norbert Rethmann
The SARIA Bio-Industries success story began when RETHMANN acquired a plant in Marl in 1977 that processed animal by-products. The company started out producing animal meal and fats before becoming the manufacturer of quality goods for human consumption, animal nutrition, agriculture, aquaculture and industrial applications it is today, as well as a producer of renewable energies and a provider of services to the agricultural and food industries. It has been a long road, involving bigger, more advanced production facilities, additional handling and logistical capacity and increasingly sophisticated environmental technology. SARIA now has a presence in nine European countries. The following pages provide an overview of the wide range of SARIA plants in Europe.

France

SARIA animal by-product processing plant in Illzach (Mulhouse)

Purpose: Processes Category 3 materials
Commissioned by: SARIA
Operations commenced: Upgraded in 2003
Capacity: 80,000 tonnes/year
Production of: Meal (26,500 tonnes/year)
Bone fat (1,500 tonnes/year)
Fat (10,600 tonnes/year)
Vehicles: 36
Total investment: €13 million
Number of employees: 36
Partners: Bürgel, Gerhard + Rauh, Loos, Lübbers and Hempelmann
Germany

SecAnim animal by-product processing plant in Malchin

Purpose: Processes Category 1 animal by-products
Commissioned by: SARIA Bio-Industries (SecAnim GmbH)
Operations commenced: 1998
Production of: Animal fat (oleochemical) and animal meal (incineration)
Capacity: 10 tonnes/hour
Total investment: €22 million
Number of employees: 50
Partners: Peters Bau, Umag

Czech Republic

SARIA animal by-product processing plant in Zichlinek

Purpose: Processes Category 1 animal by-products
Commissioned by: SARIA
Operations commenced: Acquired by SARIA in 2002
Production of: Meal and fat (incineration, energy generation)
Total investment: Approx. €3.8 million since 2002
Number of employees: 83
Partners: ABV, Hydrotech, IZV
### France

**SARIA animal by-product processing plant in Plouvara**

| Purpose: | Processes Category 1 and Category 2 materials |
| Commissioned by: | SARIA Industries (F), SIFDDA |
| Operations commenced: | Upgraded in 2001 |
| Capacity: | 178,000 tonnes/year |
| Production of: | Meal (42,000 tonnes/year) |
| | Fat (20,000 tonnes/year) |
| | Skins (16,600) |
| Vehicles: | 36 |
| Total investment: | €17 million since 2001 |
| Number of employees: | 96 |
| Partners: | Gerhard + Rauh, JEGAT, SIL |

### Belarus

**SARIA animal by-product processing plant in Bereza**

| Purpose: | Processes Category 1 animal by-products |
| Commissioned by: | SARIA Bio-Industries |
| Operations commenced: | 2008 |
| Production of: | Animal meal and animal fat |
| Capacity: | 40,000 tonnes/year |
| Total investment: | €15 million |
| Number of employees: | 70 |
| Partners: | G + R, Nijhues (NL) |
**SARIA animal by-product processing plant in Tulln**

**Purpose:** Processes Category 1 animal by-products and blood (Category 3)  
**Commissioned by:** SARIA Bio-Industries, Tulln site  
**Operations commenced:** 1993 - new effluent treatment plant 2000  
**Investment:** Approx. €4.5 million  
**Capacity:** 75,000 tonnes/year of animal by-products (Category 1), 10,000 tonnes/year of Category 3 materials  
**Production of:** Meal and fat (incineration as replacement fuel for internal and external use), blood meal Category 3 (fertiliser)  
**Number of employees:** 67  
**Partners:** Gerhard + Rauh

**SARIA Przewrotne**

**Purpose:** Processes Category 3 materials and feathers, sets up collection and processing facilities for food waste (ReFood)  
**Commissioned by:** SARIA Malopolska  
**Operations commenced:** Acquired in 1997, upgrading and modernisation to become the most advanced and eco-friendly plant in Poland  
**Production of:** Meals and fats  
**Capacity:** 80,000 tonnes/year  
**Total investment:** Upgrading: €8.6 million  
**Number of employees:** 125  
**Partners:** TMA, ZRB Firlej, BREMER PROAQUA, AMK Systemy Grzewcze, MONTS
**Germany**

**UNIMELT fat melting plant in Würzburg**

**Purpose:** Manufactures unprocessed and refined fats of animal origin for the food, pet food and oleochemical industries through treatment and fractionation

**Commissioned by:** UNIMELT GmbH

**Operations commenced:** Acquired from GELITA in 2004

**Production of:** Premier jus, refined beef tallow, lard, olein, stearin, soap glycerine, greaves meal and more

**Capacity:** 80,000 tonnes/year of untreated fats

**Total investment:** €3.5 million (since acquisition in 2004)

**Number of employees:** 58

**Partners:** GEA Westfalia Separator, TMA, GEA Wiegand, Höhn (a construction company)

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**Germany**

**ReFood fat processing plant in Melle**

**Purpose:** Purification of waste cooking oil and used frying fats for further processing at ecoMotion biodiesel plants

**Commissioned by:** ReFood GmbH

**Operations commenced:** Acquired from GELITA in 2004 as a UNIMELT plant, converted into a ReFood plant in 2007

**Production of:** Purified oils and fats

**Capacity:** 2,000 tonnes/month (700-tonne storage tanks)

**Total investment:** €4 million since UNIMELT took over

**Number of employees:** 23

**Partners:** Fa. Bessert Anlagentechnik
Artabra (La Coruna)

Purpose: Processes animal by-products (Category 1) and fish waste from the fish processing industry (Category 3)

Operations commenced: Acquired by DIMARGRASA in 2006

Production of: Category 1 animal meal and animal fat (processing 60,000 tonnes/year); fishmeal (11,000 tonnes/year) and fish oil production (2,000 tonnes/year) (primarily for the pet food industry)

Number of employees: 70

France

BIOCEVAL Concarneau plant

Purpose: Collects and processes of fish waste from the fish processing industry to produce specialised fishmeal and fish oils

Commissioned by: SARIA Industries (F)


Production of: Fishmeal (12,000 tonnes/year), fish oil (4,000 tonnes/year)

Capacity: 70,000 tonnes/year

Total investment: €7 million

Number of employees: 48

Partners: JEGAT, CEI, Le Garrec, BERRE, Jender, Hempelmann
Germany

ecoMotion biodiesel plant in Lünen

Purpose: A dual-line multifeed plant capable of processing both plant and animal fats and oils
Commissioned by: ecoMotion GmbH
Operations commenced: 2006
Production of: 100,000 tonnes/year of biodiesel, 10,000 tonnes/year of glycerine
Total investment: €24 million
Number of employees: 27
Partners: Biodiesel International, Graz, Helmut Peters Bau, Hamburg

ReFood biogas plant in Malchin

Purpose: Generates of electrical and thermal energy by using biogas from the fermentation of organic residues such as food waste
Commissioned by: ReFood GmbH
Operations commenced: 2008
Production of: Biogas, electricity (8,000 MWh/year), heat (16,000 MWh/year), fermented substrate for agricultural fertilisers
Total investment: €6 million
Number of employees: 2
Partners: OBAG Hochbau, Bautzen
Animal by-products, food and kitchen waste, waste cooking oil and used frying fats are obviously not just found near processing plants. Rather, they need to be collected from a number of collection points, some of which are quite a distance away.

SARIA subsidiary ReFood collects food waste from around 60,000 restaurant operations of all sizes, SecAnim likewise visits some 60,000 customers in Germany, UNIMELT serves over 200 collection points, while SIFDDA is active across most of France. In order to service these collection points on a regular basis, a comprehensive, sophisticated logistics system is crucial. To ensure that SARIA Group’s 1,500 trucks do not have to travel long distances to reach a production facility, there are a large number of handling facilities and logistical sites. Here smaller quantities collected by region can be partly pre-processed, reloaded into large containers or silo vehicles and then transported to the onward processing plant.

### Germany

**ReFood site for logistics, handling, pre-processing Marl**

<table>
<thead>
<tr>
<th><strong>Purpose:</strong></th>
<th>Collects food waste, waste cooking oil and used frying fats, cleaning and exchange of containers, processes food waste into primary materials for transportation to biogas facilities, transports waste fats for purification at Melle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commissioned by:</strong></td>
<td>ReFood GmbH</td>
</tr>
<tr>
<td><strong>Operations commenced:</strong></td>
<td>2006 (complete remodelling of a REMONDIS site)</td>
</tr>
<tr>
<td><strong>Production of:</strong></td>
<td>Homogenous organic materials for fermentation; fats for biodiesel production</td>
</tr>
<tr>
<td><strong>Services:</strong></td>
<td>Collection, exchange, processing</td>
</tr>
<tr>
<td><strong>Number of vehicles:</strong></td>
<td>44</td>
</tr>
<tr>
<td><strong>Total investment:</strong></td>
<td>€7 million</td>
</tr>
<tr>
<td><strong>Number of employees:</strong></td>
<td>80</td>
</tr>
<tr>
<td><strong>Partners:</strong></td>
<td>TMA, Börgel</td>
</tr>
</tbody>
</table>
Germany

ReFood plant at Lampertheim-Hüttenfeld

| Purpose: | Collects food waste, waste cooking oil and used frying fats, cleaning and exchange of containers, processes food waste into primary materials for transportation to biogas facilities, transports waste fats for purification at Mele |
| Commissioned by: | ReFood GmbH |
| Operations commenced: | 1998 |
| Production of: | Organic materials for fermentation; fats for biodiesel production |
| Services: | Collection, exchange, processing |
| Total investment: | €1 million |
| Number of vehicles: | 15 |
| Number of employees: | 50 |
| Partners: | TMA, Tietjen Verfahrenstechnik, Streib |

France

Chalagnac handling facility

| Purpose: | Collects and transports of food waste to Bayet and Carnoule |
| Commissioned by: | SARIA Industries (F) |
| Operations commenced: | 1998 |
| Services: | Collection, transportation |
| Daily quantity: | 55 tonnes [Category 1 and Category 3] |
| Total investment: | €1 million |
| Number of vehicles: | 15 |
| Number of employees: | 22 |
| Partners: | REVETISOL, Eurovia |

France

Beaucaire handling facility

| Purpose: | Collects and transports food waste to Benet [Category 1 and Category 2] and Issé [Category 3] |
| Commissioned by: | SARIA Industries (F) |
| Operations commenced: | 2000 |
| Services: | Collection, transportation |
| Daily quantity: | 120 tonnes |
| (Category 1, Category 2 and Category 3) |
| Total investment: | €2 million |
| Number of vehicles: | 16 |
| Number of employees: | 18 |
| Partners: | Bouisse |
In 1987, the RETHMANN Group identified a need to recruit its own planning engineers and technicians. From that time, the company started to plan and build its own facilities for composting, processing plastics, as well as sorting paper and other materials.

In 1991, Dr. Eberhard Schmidt joined RETHMANN as technical director. As a member of the SARIA Management Board, he is now responsible for overseeing all construction and commissioning work relating to SARIA plants in Germany and beyond.

Of course, our production, handling and environmental facilities are not designed solely by the planning department. They work with leading plant engineering and construction companies such as BDI Biodiesel International AG (Graz), Börgel GmbH + Co. KG (Ibbenbüren), Haarslev A/S (DK), G+R Technology Group (Regenstauf), Helmut Peters GmbH (Hamburg), Société Industrielle Lori- entaise (SIL) and SERMIA et OHRAN to implement numerous projects.

At present, the SARIA Group’s central planning department has 11 employees. The department is supported by many experts and teams of specialists in the “SARIA countries.” Some of these people who play an important role in the development of SARIA are introduced below.

The Planners
A large number of plants planned, built and put into service
SARIA News: Dr. Schmidt, since joining RETHMANN on the technical side in 1991 and becoming technical director and head of the planning department two years later, you have planned and built many plants, including paper and DSD sorting facilities, plants for recycling plastics, construction waste and scrap electrical products, composting and power plants, rendering facilities, flue gas desulphurisation plants and many more. Biodiesel and biogas facilities were later added to this list. Do you have any idea how many plants have been built for the RETHMANN Group under your leadership?

Dr. Schmidt: I don’t know the exact number but I’m certain that we, the planning department, have planned and realised more than 100 plants for REMONDIS and SARIA over the years across Europe. There have definitely been several hundred individual projects. At the Lippewerk plant alone, we have worked on around ten new build and upgrade projects.

SARIA News: Dr. Schmidt, the array of SARIA Group facilities showcased in this issue of SARIAnews is pretty amazing. Many of these plants were planned and constructed under your leadership. Are you proud of this achievement?

Dr. Schmidt: Naturally we are pleased with our achievements with regard to building and reconfiguring plants at various locations and are also proud of the contribution we have made to the performance of the SARIA Group as a whole.

My team and I are also grateful to the Rethmann family and SARIA management for their trust when working with us and for giving us the necessary freedom of action to handle projects effectively. My thanks also go to my staff who ultimately made these things happen.
SARIA News: At present, 11 technicians and planning engineers within the SARIA planning department design facilities, prepare planning applications, award contracts, coordinate projects and supervise construction and commissioning of these plants. How do they do all that?

Dr. Schmidt: There are many important factors to consider in answering this question but I would like to name just three aspects which significantly inform our work.

Teamwork
Projects are handled by a team. This team is not restricted to members of the planning department – it involves all employees at the sites and in the regions and countries who are responsible for technical matters. Only by working constructively with people on the ground is the planning department able to handle and implement so many projects of this kind at the same time. I think it’s a textbook example of how to do things.

The working environment and a spirit of cooperation
A strong relationship built on trust has evolved over the years between the planning department staff and our colleagues at the local sites. Everyone involved respects the work of the others.

The annual technical conference is now a firm fixture in the diaries of all technical managers and staff. This event is used to discuss specialised topics, share experiences and knowledge – and also allows people to get to know each other better.

Specialist expertise and motivation
Every member of the planning department is motivated and committed to dealing with increasingly demanding project requirements in terms of timescales and content. They receive expert assistance and support from the people in charge of specific areas: Mr. Buschhart, who coordinates projects relating to the processing of animal by-products, Mr. Kassebaum, who looks after the treatment of waste water and exhaust air, as well as biogas plants, and Dr. Linder, who is responsible for developing new processes and products.

SARIA News: If you look at how facilities were planned and built in the early 1990s, what are the main differences compared to the present situation?

Dr. Schmidt: During the 90s, our prime focus was preparing planning applications to build new plants, whereas today our work is more about making improvements and upgrading. Depending on the type of planning process, these days it can take between six and twelve months to obtain a decision. The exceptions confirm the rule.

Of course, SARIA’s ongoing international expansion has also changed the locations where projects are realised. The technical modernisation and reconfiguration of our plants in Germany, France, Austria and now Poland has largely been completed so we are turning our attention more towards new projects in regions that are also new to SARIA. The investment in building a new plant on a greenfield site in Belarus in 2007 is a good example of this.

SARIA News: Do you still sometimes work with the planning departments at sister companies REMONDIS and Rhenus?

Dr. Schmidt: Yes we do, in cases where our projects affect the plants and activities of our sister companies. One example here is the scheme to incinerate meat waste at the Lippewerk power plant.

SARIA News: Thank you for talking to us, Dr. Schmidt.

PERSONAL PROFILE

Dr. Eberhard Schmidt joined what was then RETHMANN TBA as a project engineer in 1991. Previously he spent 15 years at the Henkel plant in Genthin (Saxony-Anhalt). In 1993, he became technical director of the environmental services sector and the AIR Lippewerk plant in Lünen.

He was appointed to the Management Board of SARIA Bio-Industries AG + Co. KG (which replaced RETHMANN TBA) in 2000 with a technology remit. Since 1991, he has overseen the planning and construction of around 100 plants for REMONDIS and SARIA. The total volume of investment in all these facilities amounts to over 500 million euros.
New Technical Manager at SARIA France

Thierry Dion steps into the shoes of Wolfgang Wietzke

Shortly before his retirement, Wolfgang Wietzke reviews his career, projects and time with the SARIA Group. After eight years with the Group and 40 years of professional experience, the technical manager of SARIA France will pass the baton to Thierry Dion at the end of March 2009.

Wolfgang Wietzke has been technical director at SARIA France since 2002, a position he previously held at various other companies including BI-DIM, Renault, BOSCH France, ASEA and AEG. In his view, this role demands “real powers of endurance in order to respond to the needs of 15 plants and 25 handling facilities while at the same time managing multiple projects.” As a keen marathon runner he knows what he is talking about.

According to Wolfgang Wietzke, the role of technical director involves a lot of management: “I have to approve budgets, coordinate and manage all projects, as well as dealing with technical issues. I also have to keep an eye on plant investment, i.e. find out which systems are required and ensure that we don’t exceed our budget.” The administrative side is also important, from approving technical and financing solutions to procurement, site management and final inspections.

Since 2002, Wietzke has developed and managed numerous projects: the modernisation of plants in Concarneau, Issé and Mulhouse, the refurbishment of several handling facilities (Vitré, Arzano, Morlaix, Reignac, Lomincé, Nérondes, Saint-Denis), and developing sophisticated methods of treating exhaust air and waste water. Investment in measures to protect the environment alone accounts for a third of total investment, corresponding to approximately six million euros for 2008.

Sharing experience

Wolfgang Wietzke emphasises the close relationship with technical management at SARIA Germany. Dr. Schmidt’s planning department is a strong team and is also extensively involved with project management and the operation of plants in France. Technicians within the planning department such as Mr. Bouanane, Mr. Hoppe and Mr. Kassebaum are equally comfortable working in Germany and France, according to Wolfgang Wietzke.

One of his biggest challenges was relocating fish activities from Lorient to Concarneau. The measures needed...
to benefit from increased capacity at Concarneau needed to be completed within 15 days in January 2006 on a tight budget. This ambitious target was met.

His next challenges, however, involves activities outside the world of SARIA. He wants to run a marathon in under three hours and pursue his humanitarian work for Amnesty International and the relief organisation Engineers Without Borders.

Thierry Dion – new technical director
Thierry Dion has been working with Wolfgang Wietzke since September 2008 and will take over responsibility for this area beginning in March. Previously he was a technical director at the Pfizer pharmaceutical group. Since joining SARIA he has been involved in all major technical projects including the St.-Denis handling facility, the exhaust air purification plant in Issé, projects relating to biogas and biodiesel production, the Category 2 processing projects in Benet and Plouvara and plans to relocate or convert processing and handling sites.

falhun
The Gesuga site in Queixas, Cerceda, near La Coruña (Spain) processes animal by-products that are not suitable for human consumption.

Alva in Rezé (F) collects and processes animal fats and offers a complete range for the food industry.

The Bayet site

Boiler plant at VFC Cuxhaven

Drying facility at VFC Cuxhaven

These gentlemen ensure operations run smoothly in Poland (from left: Słojniew Lis, SARIA managing director in Poland, Leszek Herian, plant manager in Golcza, Robert Was, commercial executive for the SARIA Group in Poland, and Franciszek Patko, managing director in Poland)
The KFU site in Appenweier (D) has been refurbished and modernised.

The CDU working group on agriculture visited the biogas plant and site at Schwallungen (D) in November 2008.

Ebelt (Detmold), a company which belongs to SARIA, signed a contract with the districts of Lippe and Herford, the city of Bielefeld and parts of Minden-Lübbecke district on 8 September 2008 for the disposal of animal by-products (from left: Franz-Bernhard Thier (SARIA managing director), the head of the district authority in Lippe, Friedel Heuwinkel, Bernd Sroka (senior executive, SARIA) and Wigbert Gruß (head of regulations and veterinary affairs for the district of Lippe).

Aerial view of the Vitré site in France: SARIA subsidiary KERVALIS produces preliminary products here for the pet food industry.

Inside the Sternberg biodiesel production plant: precision technology.
Planning and Technical Implementation is their Forte

Some of SARIA’s planning engineers

Markus Buschhart

As a qualified engineering technician, Markus Buschhart (41) joined the SARIA planning department in 2006. He started his career by training as a factory mechanic with the Heidelberger Cement Group until 1987. He then performed servicing and assembly tasks until 1990. He completed his technical training in 1992. Between 1992 and 2005, he gained project and planning experience at Gerhard + Rauh GmbH in building animal by-product processing facilities before going on to work on the sales side and as sales manager. He played an active part in installing plants at TBA Schäfer, TBA Genthin, Elxleben, Marl, Tullin, Bayet, Etampes, Mulhouse and Lünen.

At SARIA, he is responsible for capital investment planning and overall project management in the field of animal by-products. What he likes about this role is the wide range of project activities with an international focus. He also enjoys applying the expertise he has acquired to actively making things happen.

Udo Ackermans

Udo Ackermans (46, married with two children), a native of Lünen, trained as a draughtsman (mechanical engineering) before commencing an apprenticeship as an ICA engineering technician at the Lippewerk plant in Lünen in 1984.

After joining the company as a regular employee, his main duties related to fault clearing and keeping the power plant at Lippewerk running smoothly. He completed further technical training alongside his work. In 1994, he moved to the RETHMANN planning department, which in 1999 was split into planning departments for REMONDIS and SARIA, based in Selm. Since then he has worked on CAD drawing and documentation production and technical development. A key aspect of this is maintaining a full record of facilities at SARIA sites, structural integration of new plants and buildings and developing solutions for new builds and conversions.

Udo Ackermans is very clear about what aspect of his job he particularly likes: “That you can actively follow projects through from start to finish – from the concept and design phase to approval, tendering and execution.” He also highlights good working relationships with colleagues at other European sites.
Polish by birth, Bartosz Lange (35, married with two small children) joined the SARIA planning department in 2002. After studying ecology, environmental science and industrial engineering and gaining corresponding diplomas (Dipl.-Ing. and Dipl.-Wirt. Ing.), he completed a six-month training placement at SARIA in Germany. He then went on to manage planning and commissioning projects for SARIA operations in Poland.

Today his duties include tendering and comparing quotations, preparing contracts, project management and liaising between SARIA in Poland and the SARIA planning department in Selm. Bartosz Lange finds his work very varied and enjoys dealing with innovative technology, meeting many interesting people and the pleasant working relationships with his colleagues and superiors.

Frank Kassebaum (38, married), joined SARIA in 1998, having completed an internship at what was then RETHMANN TBA in 1994. He gained his diploma in engineering (Dipl.-Ing.) in 1995 at TBA Dörnten, as well as a diploma in industrial engineering (Dipl.-Wirt. Ing.) at RETHMANN Water Management in 1997. He was employed at the Genthin site until 2000, when he became part of the planning team in Selm.

Frank Kassebaum is head of investment planning for environmental technology, currently focusing on effluent treatment plants and biogas facilities in Germany, Poland, the Czech Republic, France and the UK.

He particularly relishes getting to know the culture and languages of our European neighbours as part of his varied role. He also enjoys seeing the positive effects on the environment when projects are completed and the sense of having helped to conserve resources.
Dr. Heinrich Linder

Dr. Heinrich Linder (50, married with three children) joined SARIA in 1999. As a trained agricultural engineer, he started his career with the planning department by developing biodiesel projects. In relation to the construction of the first biodiesel plant in Malchin, he also wrote his thesis on producing and using biodiesel made of animal fats (FME). Previously, he planned composting and biogas facilities at RETHMANN/REMONDIS. He also worked on processing facilities for animal by-products (Lünen) and other biogas and food waste processing plants.

His current tasks include developing new technical processes in order to obtain increased added value from the secondary raw materials that SARIA produces. His main objective is always to implement effective services that benefit the environment.

Dr. Anesti Duka

Dr. Anesti Duka (44) is deputy technical director at SARIA France and responsible for new processes and investment. He has worked for SARIA since October 2003.

A qualified oil production engineer with a Master’s and PhD in industrial and thermal processes, he is responsible for optimising process lines and environmental technology, especially thermal oxidation. His major projects in recent years have included renovating plants at Guer and Concarneau, and upgrading work at Plouvara. He is currently working on Category 2 processing projects for Plouvara and Benet, as well as the SARIA Group’s energy recovery project in France.
A Special Development: The ReFood Collection Vehicle with Box Body

Article by Hans-Heinrich Lüdde, ReFood managing director

Until the introduction of road charging for trucks, we deployed the Atego 1523 and 1528 in the ReFood division, mostly with a trailer. Now that sites across Germany provide nationwide coverage, trailers are hardly used at all.

Following the introduction of the road charging scheme, it was clear that we would want to develop a weight-optimised vehicle under 12 tonnes (toll-free) with a payload of approximately six tonnes without compromising on key features such as quality and durability, etc. We pulled out all the stops with regard to the chassis, including fitting extremely expensive aluminium wheels. The 12-tonne “light” model subsequently launched by Mercedes made it possible to achieve our objective.

It would not have helped to make the vehicle shorter, because we wanted the shortest possible wheelbase for manoeuvrability but an internal body length of at least 7.35 m. It has emerged that operationally we require on average 60 paid containers per day per truck. Despite these dimensions, which are not exactly small, we have shown that we can service all customers in Germany using this vehicle, with a few exceptions. In the worst-case scenario it’s necessary to drag the disposal containers a few metres.

We had already standardised the body itself as described above for the 15-tonne version. It features highly durable, anti-slip flooring which prevents containers from tipping over or sliding excessively. With suitable footwear it is highly slip-resistant. Steitz Secura helped us to carry out extensive testing on soles until we came up with the Perhunan sole composite used now, which works well on an oily aluminium floor. Due to its anti-slip properties, the textured aluminium flooring is also used on-site in reception halls.

We should also mention the extremely tough tail lift from Wüllhorst (an enhanced version of the old tail lift) with its highly warp-resistant special platform, triple holdfast system and minimal electronics. This has meant we have experienced virtually no downtime here apart from wear and tear and negligent damage.

The body also features numerous lashing rails and rub rails, as well as a reinforced end wall. The special aluminium flooring mentioned above is designed to act as a tub liner that is impermeable to liquid and has a collection channel at the back to collect liquid from any containers that may leak. The walls consist of an extremely light honeycomb panel system used in the aviation industry which can withstand even the toughest hammer test. As a result, the current ReFood collection vehicle incurs no tolls and is lighter and therefore consumes less fuel – providing a vehicle that is outstandingly fit for purpose. A powerful four-cylinder engine is fitted, whereas previously we needed a six-cylinder engine to deliver comparable performance.

Overall, this is a very economical truck with a service life of up to seven years, even if used in a demanding distribution role with several drivers per week at times. Experience shows that until the seventh year we need to replace very few systems such as the engine, transmission or other parts of the drivetrain.

At present, ReFood in Germany has approximately 275 special vehicles, the majority featuring a box body. There are also other special vehicles developed by us such as the short Gerlicher vehicles (FATBACK™ system), silo vehicles for transporting substrates and double-stack containers for transporting frying fats nationwide. ●Hans-Heinrich Lüdde
Providing the wide range of services offered by the SARIA Group requires a large fleet of vehicles to meet the associated logistical needs. In total, the SARIA Group deploys some 1,500 trucks in various configurations across Europe.

1,500 Special Vehicles Deployed Across Europe for SARIA

The right vehicle for every scenario
In Germany alone, more than 110,000 locations need to be visited. These are just some of the vehicle types in use: ecoMotion tankers, SecAnim/SIFDDA collectors of condemned waste, ReFood box trucks, ReFood articulated containers (double-stack), ReFood tankers, UNIMELT refrigerated truck bodies, KFU refrigerated truck bodies, KFU truck trailers (refrigerated), Gerlicher fat collectors and Schnittger transporters for skins.

These vehicles nearly all feature a specially designed body to make them suitable for one of a wide range of tasks, such as collecting fallen animals from farmers, collecting and delivering containers for food waste or used frying fats, transporting animal meal in silo vehicles, transporting biodiesel in tankers, collecting and exchanging smaller containers of cooking oil and much more.

Depending on the requirement it is thus necessary to design and build special bodies. Wüllhorst Fahrzeugbau GmbH, based in Selm, has been working on this for REMONDIS and SARIA for many years. The company has been in business for 128 years. In the early days it was mainly a wheelwright, constructing wheels and wagons for agricultural use, before expanding into bodywork from 1948. As well as making driver’s cabs, platforms and body structures, the company also specialises in food industry applications. With over 150 employees, the company responds to customer needs flexibly in the shape of proprietary developments and patents for refrigerated, beverage and catering vehicles, special bodies and specific changing systems.

The ReFood collection vehicle is one example of innovative cooperation between the customer with their vehicle requirements and the specialist provider. The box body was enhanced step by step to meet demands for a higher payload and greater surface load on the floor coupled with lightweight construction. It was particularly challenging to develop a tough, non-slip, durable aluminium floor capable of withstanding huge loads on a daily basis. This flooring is now also used as standard for the unloading ramps at ReFood sites.

Wüllhorst’s latest development is the box body for a shorter Atego, which new SARIA company Gerlicher uses to deliver cooking fats and oils to restaurant operations and then to collect used fats. This vehicle is deployed extensively in urban areas with mostly small units needing to be unloaded and loaded quickly. A sliding door was therefore incorporated at the side.

Wüllhorst has already designed and built many other special bodies for REMONDIS, such as refrigerated bodies for Medison (hospital waste), collection vehicles for DAT containers or all types of vehicles for collecting contaminants.

All vehicles were, and still are, equipped with a central lubrication system which permits longer service intervals. • cma
Structure of a biofilter and how it works

All the exhaust air from the halls and unpleasant smelling process exhaust air (vapour) is extracted, cleaned and then discharged through large biological filters (biobeds).

The biological filter consists of a filter bed made of organic materials (root wood, heather) in a layer approximately 1.5 m thick through which the polluted air is passed. For this purpose, the filter bed is built on a floor that is permeable to air through being raised on stilts in a concrete tank. The extraction system collects exhaust air from the plant and blows it under the filter bed so it can then flow through the filter layer. The organic material that makes up the filter layer contains micro-organisms which need carbon and air/oxygen to metabolise. In the process, odours in the exhaust air are broken down by the micro-organisms. This method is state of the art when it comes to treating exhaust air from animal by-product processing facilities.

Biofilter plant at Concarneau, France

<table>
<thead>
<tr>
<th>Purpose:</th>
<th>Cleaning facility/processes exhaust air</th>
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<tr>
<td>Commissioned by:</td>
<td>SARIA Industries</td>
</tr>
<tr>
<td>Operations commenced:</td>
<td>2007</td>
</tr>
<tr>
<td>Production of:</td>
<td>Cleaned exhaust air (100,000 m³/hr)</td>
</tr>
<tr>
<td>Planning engineers:</td>
<td>Wietzke</td>
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<tr>
<td>Partners:</td>
<td>Hempelmann, Jender, CIMC</td>
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Ultrafiltration for Precision Cleaning of Waste Water

Waste water is conveyed from the effluent treatment plant’s activated stage to ultrafiltration membranes. Ultrafiltration systems are mostly supplied as complete plants in a container and act as a secondary sedimentation process.

The membrane packets comprise several bundles of hollow fibre membranes which are fitted directly into the biomass in the filtration container. The membranes are made of polymers such as cellulose acetate or polyacrylamide. The flow of water from the activated stage is regulated by a pump. Once a certain level is reached in the activation tank, the drain pump is switched on and water is pumped into the ultrafiltration container. Here the drain water is discharged via submerged ultrafiltration membranes with a pore size of 0.035 m. In the process, the biomass and all solids are separated from the water and pumped back into the activation tank. With all the sludge and particles removed, the water is of a very high quality and is transferred to the receiving waters. To keep them free of deposits, the ultrafiltration membranes are cleaned continually by a transverse air flow. Pore blockages are avoided by backflushing the permeating liquid (this is (waste) water that has already been ultrafiltered and cleaned). This reduces the need to clean the membranes using chemicals to three or four times a year.

Ultrafiltration plant (Golcza (Poland) as an example)

- **Purpose:** Cleans waste water using membrane filtration
- **Commissioned by:** SARIA Malopolska
- **Operations commenced:** 2007
- **Production of:** Purified water
  - (CSB mg/l: 37 mg/l – limit 200 mg/l)
  - (NH4 mg/l: 0.24 mg/l – limit 20 mg/l)
- **Planning engineers:** Kassebaum, Lange
- **Partners:** Bremer ProAqua

Vapour oxidation – an end to smells

Vapour oxidation is a thermal post-combustion system for dealing with foul-smelling hot steam (water vapour) from vapourisation processes, such as exhaust air from sterilisers and driers in a plant that processes animal by-products. These replace vapour condensation in the air condenser and then clean the exhaust air using a biological and/or chemical method.

A post-combustion plant consists of a special burner, a combustion chamber, a downstream heat recovery boiler and the chimney. Vapour is combusted at 850°C and spends 2.5 seconds in the combustion chamber. After leaving the combustion chamber, the exhaust gas is directed to the heat recovery boiler to generate steam and is then released into the atmosphere via the chimney.

Vapour oxidation plant (SIFDDA plant at Guer (France) as an example)

- **Purpose:** Thermal post-combustion of foul-smelling hot steam (water vapour) from vapourisation processes in a plant that processes animal by-products
- **Commissioned by:** SIFDDA
- **Operations commenced:** 2005
- **Planning engineer:** Althaus
- **Partners:** Hilgefert
Dietmar Ernst

Dietmar Ernst (46) from Genthin has worked for SARIA since 1997 and is currently manager of the SecAnim site in Mützel (near Genthin).

After qualifying as an engineer in technical cybernetics and electrical engineering, he worked in research and development at Stahl- und Apparatebau Genthin from 1988 to 1994. He then became a project engineer for Ballerstein Elektrotechnik, also based in Genthin.

“When I started working for SARIA, I was very impressed by TBA technology, which I was unfamiliar with at that time, and by the degree of automation within the industry. That’s why it meant a lot to me to be involved in building a completely new animal by-product processing plant and getting a facility of this size up and running. I enjoy learning about new production technology and feel quite proud to know that every day I help to ensure operational reliability. You really notice this when visitors and guests see the TBA and are amazed by the impressive state of the plant and the sophisticated technology.”

Dr. Henry Helmholz

Dr. Henry Helmholz (53, married with two grown sons) has been manager of the SecAnim branch in Elxleben (Thuringia) since early 2006. Born in Brandenburg, he gained his high school leaving certificate in 1975 and then went on to study mechanical engineering and materials technology before graduating in 1982 with a diploma in engineering. In 1987, he obtained a PhD in materials technology.

In the course of his professional career, he has trained as a steel worker (1975), studied at Chemnitz Technical University, was an assistant at TH Wismar and held various management positions at Metallleichtbau Brandenburg (structural steelwork, system building). In 1995, he joined REMONDIS Recyclingpark Brandenburg, where he was a project manager and managing director until the year 2000.

In September 2000, he moved to SARIA (East) where he was responsible for quality management, safety, pollution control and tradable emission permits, etc.

He says the following about his work as manager of a SARIA site: “I like the complexity of the job (technology, logistics, business management and policy), as well as the streamlined decision-making process and working for a highly successful family company.”
Plants cannot enter service or run smoothly without trained, competent staff to operate, supervise and maintain them. SARIA plants have to run largely fault-free because raw materials are delivered every day and must be properly processed quickly and hygienically. As we know, animal by-products are highly perishable!

Our on-site employees include branch managers, machine technicians, production managers, plant operators and maintenance engineers. We would like to introduce some of them to our readers here.

Francis Martinelle

As part of his role as technical manager at Issé, Francis Martinelle (45) is responsible for setting up programmes and monitoring them with regard to maintenance on the electrical and mechanical side, as well as for construction sites and workflows. He joined SARIA in 2004.

He is currently in charge of work on the construction site for the new feathers, meat and blood line and for the biofilter system. He receives support from a manager who looks after the electrics, a maintenance manager and a servicing team of nine. German technicians also provide support, with his command of two languages proving invaluable here.

Czesław Malita

Czesław Malita (39, married with four children) started out as a bookkeeper at SARIA Malopolska in Przewrotnie, a role in which he already had four years’ experience at another Polish company. In 1997 he became production manager, and since 2002 has been the local manager of the SARIA production facility in Przewrotnie, a small town approximately 20 km north of the city of Rzeszów. He particularly likes the way his job always presents new challenges. A lot has been invested in the old site in the past few years, especially with regard to protecting the environment. As a result, the Przewrotnie site was recently designated “Poland’s most advanced production facility”, an accolade that the employees are keen to live up to.

Malita values the fact that SARIA Malopolska is a modern, dynamic company and therefore pays particular attention to boosting product quality and specialising in different products.
Zdenek Dolezel

After training as a mechanical engineer and working as a project manager, Zdenek Dolezel (51, married with one child) joined SARIA in Zichlinek in 1984, initially as fleet manager. He soon took up the role of production manager, with a special interest in extending and upgrading the effluent treatment plant. “Proper treatment of our waste water and preventing air pollution are important to me,” says Dolezel.

The variety of tasks associated with such a site and the ability to follow major investment projects through, such as the effluent treatment plant, are aspects of his job that he particularly likes.

Johannes Fuchs

If you ask the plant manager at the SARIA branch in Tulln (Austria), Johannes Fuchs (43), what he especially likes about his work, he does not have to think about it for long: “It’s working with the people around me. These colleagues and team members and the sense of being able to improve things motivate me to handle an extensive array of tasks ranging from accepting raw materials and processing them – with the associated secondary systems, such as treating exhaust air and waste water – through to generating energy, with all the technical, managerial and legal aspects involved.”

Born in Vienna, this married father of two teenagers has been with SARIA since early 1998. After training as a mechanical engineer at the Leoben institute of higher education, he worked for a plant engineering company (combustion engineering, fluidised bed technology) between 1986 and 1993 in planning, research, development and commissioning. From 1993 to 1997, he worked for a waste company in the areas of planning and industrial engineering and as technical director of a Hungarian incineration facility for hazardous waste.

Johannes Fuchs joined SARIA at the beginning of 1998. Today, he is a commercial and technical plant manager with responsibility for human resources, budgeting and sales of animal/blood meal and animal fat products.
Christian Garel

Christian Garel (56) started work at SARIA 31 years ago as a foreman in Grigny (this plant is now closed). He then spent 13 years at Saint-Denis and four years in Concarneau.

Since 1997, he has been production manager in Bayet. He is responsible for environmental and industrial management (high risk and low risk) and has the support of a production and maintenance team, together with the environmental department. He also deals with technical projects at the plant. For example, he is currently closely involved with the building of three new storage silos for meal (Category 3).

Fernando Rodríguez González

Fernando Rodríguez González (33, married) has been technical plant manager at SARIA’s DIMARGRASA plant in Spain (near Madrid) since 2006. A trained engineer, he previously worked as a maintenance plant manager, production engineer and head of machine maintenance at various Spanish companies.

His present duties include supervising technical equipment, maintenance and optimising system operation. Professionally, Señor González relishes the fact that: “My dynamic role involves a lot of responsibility and I particularly enjoy working in a multinational context. The flat hierarchy also offers a great deal of potential for development. I’m convinced that the Group is ideally placed to face upcoming changes in the Spanish waste management market.”
Energy Costs – The Challenge Facing Us in the Years Ahead

As asked about SARIA’s plant engineering focus in the coming years, board member Dr. Eberhard Schmidt cites the reduction of energy costs.

If you consider the way costs have changed in the energy sector (fuels, electricity), I’m convinced that reducing energy costs by using derived energy will – and must – be one of the focal points of our work in future.

How we process abattoir by-products is dominated, in energy terms, by the thermal processes of sterilisation and drying.

Given that the condensation of vapour (air saturated with steam that is produced during boiling or drying) from sterilisation and drying consumes approximately two-thirds of the energy used, it is clearly crucial to leverage this energy in future to boost the energy efficiency of our processes.

New technical solutions such as at KFU in Marl or SecAnim in Mützel show that energy savings of approximately 30% can be achieved by using the vapour from a drying-by-evaporation facility for the purposes of pre-drying our raw materials.

This potential energy saving has also compelled us to rethink other technical design aspects around our processing plants.

Initial ideas for implementing these technological changes have already been put on paper and we hope to start realising related projects in 2009.”

Dr. Eberhard Schmidt
Thinking Outside the Box
New aspects of using/processing meals and fats

Rather than “Is there life beyond Earth?”, in the rendering sector the question should be:
Are there markets beyond the table, trough and tank, beyond agriculture, furnaces and the oleochemical industry?

Food, animal feed, fertilisers, fuels and basic materials for the oleochemical industry are and remain the main products we manufacture on a daily basis. But are there different, perhaps totally new markets or products for us?

While universities and research institutes in European countries only address these issues occasionally, in the United States the Fats and Proteins Research Foundation (FPRF) has financed research into rendering since 1962 and the Animal Co-Products Research and Education Center (ACREC) at Clemson University (South Carolina) since 2005. SARIA has been a member of the FPRF for many years. The focus has always been on areas with the greatest added value: feeds and, in recent times, increasingly aquaculture. Meanwhile, the Eastern Regional Research Center (ERRC) in Wyndmoor, Pennsylvania, which is part of the US Department of Agriculture, concerns itself with the use of animal by-products.

Here are some of the diverse research topics being pursued:
• Producing biodegradable plastics
• Producing biodiesel in a three-phase reactor
• New structured polymers
• Extracting natural growth promoters
• Reducing the salmonella risk using bacteriophages
• Natural antioxidants based on proteins

SARIA committed to identifying new uses for its own products and to making them commercially viable

• Isolating antimicrobiological substances
• Conditions for the thermal elimination of the bird flu virus
• Tallow modifications to improve absorption in the rumen
• Locating reusable microbiological materials in flotation sludge
• Producing bioactive cleaning materials from fats by means of fermentation
• Uses for glycerine
• Biodiesel from fatty solids

The example of deriving biodiesel from animal fats in particular shows how important the knowledge advantage is in today’s environment. In the United States this has gone from being a niche product to an important market in just a short time.

SARIA actively engaged with this topic in the late 1990s and went on to build two state-of-the-art biodiesel fat facilities (Malchin 2001, Lünen 2006), thereby demonstrating the Group’s commitment to identifying new uses for its own products and to making them commercially viable, either on its own or by participating in the research activities described above. Dr. Martin Alm
Since mid-2008, a new subsidiary has been complementing the SARIA Group’s activities in Germany: GERLICHER GmbH. GERLICHER supplies high-quality oils and fats to the restaurant, catering and food industries throughout Germany and collects used frying fats so they can be processed in an eco-friendly way.

Plant fats and oils, and their quality, play a crucial role in the catering trade. To ensure the best possible flavour and maximum freshness and hygiene, frying fats in particular need to be changed regularly. New SARIA subsidiary GERLICHER specialises in this segment. In addition to the food industry, the company supplies restaurants across Germany with a wide range of high-quality oils and fats while at the same time disposing of used frying oils. To do this, GERLICHER uses its own innovative FATBACK™ system to facilitate delivery and collection of oils and fats.

The special feature of this patented, proprietary development is that products are delivered and collected in reusable containers (with a capacity of 20 or 30 litres), with the entire service forming a cycle. First GERLICHER delivers the fresh oil in a FATBACK™ container which can be emptied through a special venting channel with minimal fuss. A different, empty FATBACK™ container is then filled with used frying oil and hygienically sealed to prevent leaks. At the next delivery, the container of used frying fat is collected and exchanged. This not only makes business and ecological sense, it is also practical, clean and makes life easier for restaurateurs!

“The reusable FATBACK™ containers are a perfect example of efficient avoidance of unnecessary waste,” says Siegfried Kochanek, who is one of three managing directors of the Berlin-based company founded in 1985, alongside Hans-Heinrich Lüdde and SARIA board member Franz-Bernhard Thier. After collection, the used fat is processed into biodiesel – a solution that makes environmental sense and conserves resources. Thanks to a nationwide distribution network, prompt deliveries and personal service are guaranteed.

How the Gerlicher FATBACK™ system works

A new look for Gerlicher vehicles
Schnittger – Experts in Skins and Hides

Attracting customers with the new ‘BayernLeder’ brand

Gebrüder Schnittger GmbH is one of the leading German companies in the skins and hides sector and operates out of sites in Bogen, Wolfertschwenden and Alzenau. With state-of-the-art technical facilities and specialists, qualified personnel, Schnittger has been a respected supplier to the international leather industry for over 50 years. The company is a one-stop provider covering all aspects of the process, from preparing the raw materials to high quality finishing for a range of trade partners.

The company obtains (mainly) cattle/bull skins from German/Bavarian abattoir operations. Deliveries are typically made in the afternoons. The skins are then hung up, logged (origin, weight) and stored in a refrigerated room. If skins need to be stored for longer until they can be processed, they are cured on-site either manually or by machine.

Schnittger sells these skins to tanneries that then process the skins and sell them to a range of customers. These tanneries supply large batches (100 skins or more) to the furniture industry, makers of vehicle seats or cruise ship and aircraft outfitters, for example. Schnittger also supplies skins to subcontracted tanneries which tan, sort and dye the skins on Schnittger’s behalf. These subcontractors supply three types of products to Schnittger:

- a. So-called wet blue skins (top part of the skin after splitting, also known as the grain split) which are re-sorted by Schnittger and then sold on to traders and tanneries for finishing
- b. The splits (lower part of the skin after splitting)
- c. Dyed finished leather which is sold by Schnittger and will be marketed under the new BayernLeder label in future

**Schnittger’s customers**

1) Upholstery workshops
2) Makers of smaller items of furniture (factories)
3) Upholstered furniture makers
4) Specialized outfitters (for hotels, restaurants, lobbies, conference rooms, concert halls, yachts, private aeroplanes, mobile homes)
5) Tanneries

**Benefits of finished leather (BayernLeder)**

1) BayernLeder is pesticide-free because it comes directly from Germany/Bavaria; the long journeys by ship and associated treatment with preservatives are not necessary
2) A high quality German product
3) Schnittger has a large stock of finished leather – on average up to 25 colours for five particularly popular items. Customers do not need to store large amounts of material themselves
4) Same-day delivery in most cases
5) Very high quality
   a) Skins are large, aniline dyed and flawless
   b) Skins are dyed through the entire thickness – unlike cheaper surface dying – using aniline dyes

» Claus M. Andreas
Spain: SARIA extends its Business Activities

Two new sites: T.S.C. in Tarancón and IBERGRASA in Humanes

SARIA Spain acquired two companies, TSC and Ibergrasa, in the first two months of this year. TSC built a modern facility for processing animal by-products in Tarancón in 2007.

Tarancón is situated 80 km to the east of Madrid in the Castilla-La Mancha region. Ibergrasa is based in Humanes de Madrid in the province of Madrid and, like TSC, manufactures quality products for the pet food industry and for industrial applications.

The number of people using the Internet to find information is rising all the time. In Germany, 64% of the population uses the World Wide Web regularly. On average, men spend 1.3 hours online every day and women 0.8 hours. It is not just the number of users that is rising fast – display formats and techniques are also changing all the time, which is reason enough to give our website a fresh new look.

The new website for the SARIA Bio-Industries Group has been completely redesigned and has been available online in German at www.saria.
By acquiring these two companies SARIA has been able to expand its existing activities in Spain significantly. To date, SARIA has operated out of locations in Arganda del Rey near Madrid, Arteixo and Cerceda, both near La Coruña, producing meal and fats for the pet food and oleochemical industries, collecting and disposing of risk material and specialising in decentralised power generation.

The new IBERICA DE GRASAS Y PROTEINA, S.A. (IBERGRASA) site in Humanes de Madrid

Once a year, managing directors, divisional heads, branch managers, sales managers and sales and admin staff meet at a different place in Germany to network and exchange experiences. On this occasion, the meeting was held in Münster from 22 to 23 January 2009.

Eighty participants from Germany, Poland, Austria, the Czech Republic and Belarus got together for a total of 15 presentations on new developments relating to every part of the SARIA Group. Among others, Dr. Stoffel reported on the Group’s financial results and other developments, Dr. Martin Alm shared news from state, federal and European institutions and Manfred Gellner reported on Eastern and Central Europe, while Ludger Wendel outlined the Gerlicher FATBACK™ system. Dr. Eberhard Schmidt talked about energy-saving projects and Dr. Robert Figgener discussed issues relating to the biodiesel sector. Other topics included further specialisation of fish meal and fish oil products, fertilisers, biogas plants and SARIA’s new “skins and leather” business.

This is definitely one of the most important annual events for SARIA Germany, allowing attendees to gain an excellent overview of the Group’s diverse range of activities. During the breaks, over lunch and dinner and at the social evening in particular, there are always plenty of opportunities to have interesting work-related conversations, to get to know new members of staff and to reinforce existing relationships. As one participant put it very succinctly: “Here you always feel like part of a ‘family’, despite the company’s increasing size.”

Marcel Derichs