PÖRNER GRUPPE

ENGINEERING-TIMES

PÖRNER GRUPPE

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ACHEMA 2012

ACHEMA 2012
Frankfurt am Main
18 – 22 June 2012

Dear visitors to ACHEMA, dear business partners, dear friends,

*We are pleased to inform you that the Pörner Group will take part again in the most important forum of the process industry. Because of the positive feedback of the last few years we set up again our **"Ingenieurs-Café"** for you to get away from the hustle and bustle of the trade show and talk with our engineers on new projects in a nice atmosphere.*

Like in a real cafe you can find international newspapers and magazines - among them our Engineering-Times with a special edition to mark the 40th birthday of Pörner.

Take the time and read what happened in the last four decades, how the company grew and what we achieve today.

We wish all our customers and partners a successful exhibition!

Visit us at
Hall 9.1
Stand D 63

40 years'
fascination of plant engineering

A great anniversary: reason enough to pause for a moment and remember what was there. And celebrate what became of it. How have this world, Europe and the world of engineering changed in all these years.

40 years of Pörner: it is a good reason to look back at the four decades of actively shaping the domestic industrial landscape by over 2,000 projects.

Creativity, advanced technology and handling projects with economy always in mind is our contribution to maintain the competitiveness of Austria and Germany as leading industrial countries.

Success through creativity

The basis was and still is enthusiasm for the fascinating job of "Process Engineering". Process plants are a physical and real antipole to the virtual business of banks and insurance companies, for example. As creative plant engineers we bring into being something tangible: smart, energy- and environmentally optimized plants composed of state-of-the-art components to manufacture valuable products. Additionally we create intangible assets: know-how, references, experience which we pass on in the form of engineering solutions.

Constant advancement

In these 40 years just a handful of medium-sized engineering firms have survived apart from few globally acting major plant engineering and construction firms in the German-speaking world. Many a competitor gave up. In the same period the Pörner Group was able to develop a prospering and well-positioned network of engineers by selective specialization and a worldwide presence.

Today there cannot be enough engineering capacities in Europe for the construction of process plants to cope with the challenges of the future by technology.

Winning trust

We are aware of the trust customers put in us when they entrust us with plant engineering projects worth € 100 million and more.

We are proud to design, manage, procure, construct and commission such complex plants by own resources, building on decades of experience in industrial plant construction.

Focussing on the process industry

Our executives and project managers who have plant engineering in their veins continue steering the Pörner Group towards higher efficiency to become "level with the best".

The presence on new export markets is to be reflected in further healthy growth. Based on intensive research Europe increasingly sees the construction of small to medium-sized plants for specialty products. When it comes to such innovative projects we want to be on hand with help and advice for our customers from the initial concept through to completion always providing the Pörner-specific "decisive extra".

We want to extend our specialization in plant revamps and fully bring to bear our potentials in process engineering and all other disciplines. We are optimistic about the future because it needs a capable process industry to create the basis for a modern life.

Thank you for 40 years

Thanks to all who contributed to the success of this company.

Thanks to our visionary founder Kurt Thomas Pörner for his great achievement in building the company. Thanks to all shareholders, managing directors, department managers and project managers for the years they dedicated themselves to the success of the Group.

Thanks to all customers who kept entrusting us with their major investments.

Thanks to our process partners and regular suppliers of equipment, construction firms who went along with us in all these years.

Last but not least: Heartfelt thanks to our engineers and all employees whose ideas and commitment made it possible to build plants on all continents.

We are looking forward to new challenges we want to take up jointly in the great partner network of the process plant engineering.

Andreas Pörner
and Peter Schlossnikel

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EDITORIAL

Genuine Quality

How does the quality of an engineering office come to light? It is one point ultimately – the staff. It is not the best and most beautiful means of production it comes down to but the people who use them. Pörner has always been aware of that and fostered and cared for its assets. The result is a minimum fluctuation – once becoming a member of the Pörner family you will not leave it easily.

How goes the care for employees?

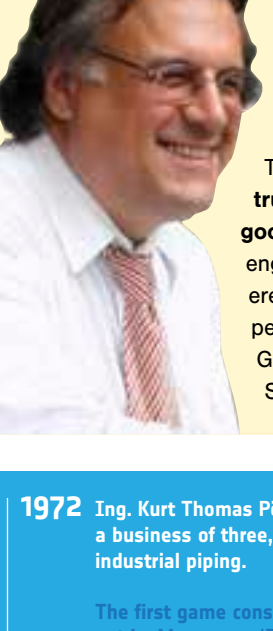
Certainly not by contracts with oppressive terms and a strict regime. It is our common aim to take pleasure in our job every day, make sure that we like spending many hours in the office or at a site because we are given the opportunity to fulfil extremely exciting and fascinating tasks – the planning and construction of complex industrial plants in different parts of the world. Only committed and responsible people can achieve that in the interest of the project, the customer and the company. The perfect mix of young and old, experienced and those eager to learn is the perfect solution.

Sworn community

Some of this branch start drumming up freelancers after a contract has been awarded. But the availability of theoretical job descriptions, still being common practice in the Anglo-American region, will certainly never replace the perfect cooperation of a sworn and reliable community.

And that is where quality comes into play. How can a pieced together troupe of "mercenaries" deliver genuine quality in one of the world's most demanding branch of industry? Practice has shown: it does not work! Such projects are increasingly doomed to failure.

Quality shows itself by a perfect overall performance. That a project has to be delivered on time and within the budget goes without saying. Everything is to function optimally and the customer must be satisfied with the new production plant and its products. This is where the **true quality of our goods** lies – perfect engineering delivered by excellent people of the Pörner Group. (Peter Schlossnikel)



INTERVIEW WITH FOUNDER K. TH. PÖRNER

Foundation of the Pörner Group

Pörner Ingenieurgesellschaft was founded 40 years ago. A three-man company became the Pörner Group. We wanted to know how it all began, and so we asked its founder Kurt Thomas Pörner.

What was your inspiration to start the business?

After graduation from university I worked for ÖMV as a planning engineer at the Schwechat Refinery. Back then it was common practice to teach the ropes to newcomers. We were made acquainted with the ins and outs of all process plants and facilities of a refinery both in theory and practice. It was the time when a number of new plants were designed and built by international engineering firms. Our planning department provided technical support services for these large-scale projects, and so I got to know very early the way these engineering firms worked. The then striking differences between earning potentials in Austria and elsewhere made it easy for me and my wife to move to Germany for some time.

Company car of the founder: Opel Commodore 1972

As a contract technician I worked for several engineering offices within a short time and ended up at the then largest engineering office for the refinery sector in Germany. Back in Austria there was soon the opportunity to start my own business together with a colleague (Ingenieurbüro Pörner & Engelmann). Because of the demand for qualified personnel und our ability to work reliably and deliver on time there were enough jobs to do. Especially my ÖMV insider training and practice turned out to be advantageous because hardly any one of my colleagues knew the functioning of a refinery as a whole. The fact that the conceptual design of plants and an entire refinery was awarded to me still makes me proud 40 years on.

How did you get hold of the first projects?

The idea to build up an engineering office in Austria following international standards was my vision. Back then the term "engineering office" was hardly known and more or less known to ÖMV only. Contracts from this company were an important stepping stone for our further development. The head of the project department then recommended us to former VÖEST Anlagenbau because they had asked ÖMV for assistance in a refinery project in Congo.

Founder K. Th. Pörner

It was the first major contract for us and we did the planning of the process plants. Because of the punctual and professional execution of this project we were awarded a number of smaller contracts and finally the overall planning of a refinery in Mauretania. When the company grew to a staff of 40 within just two years I established our own sales department.

How did you manage the transition from piping design to full-service plant engineering?

There can be no talk of a transition. Piping design is now as before a main pillar of refinery construction. It requires at least basic knowledge of all other disciplines and is the biggest chunk of a project because it is where the plant is designed. The transition proper was from refinery planning to industrial plant engineering due to the fact that there is only one refinery in Austria. It was a rocky road. Not only once I had to explain to interested parties what an engineering office is needed for in view of the fact that we had no idea of beer brewing or pulping. "Beer brewing and pulping is your know-how, ours is the realization of an industrial project keeping with required budget and time frame and delivering the quality expected.", I had to explain again and again.

1974: Model acceptance by customer

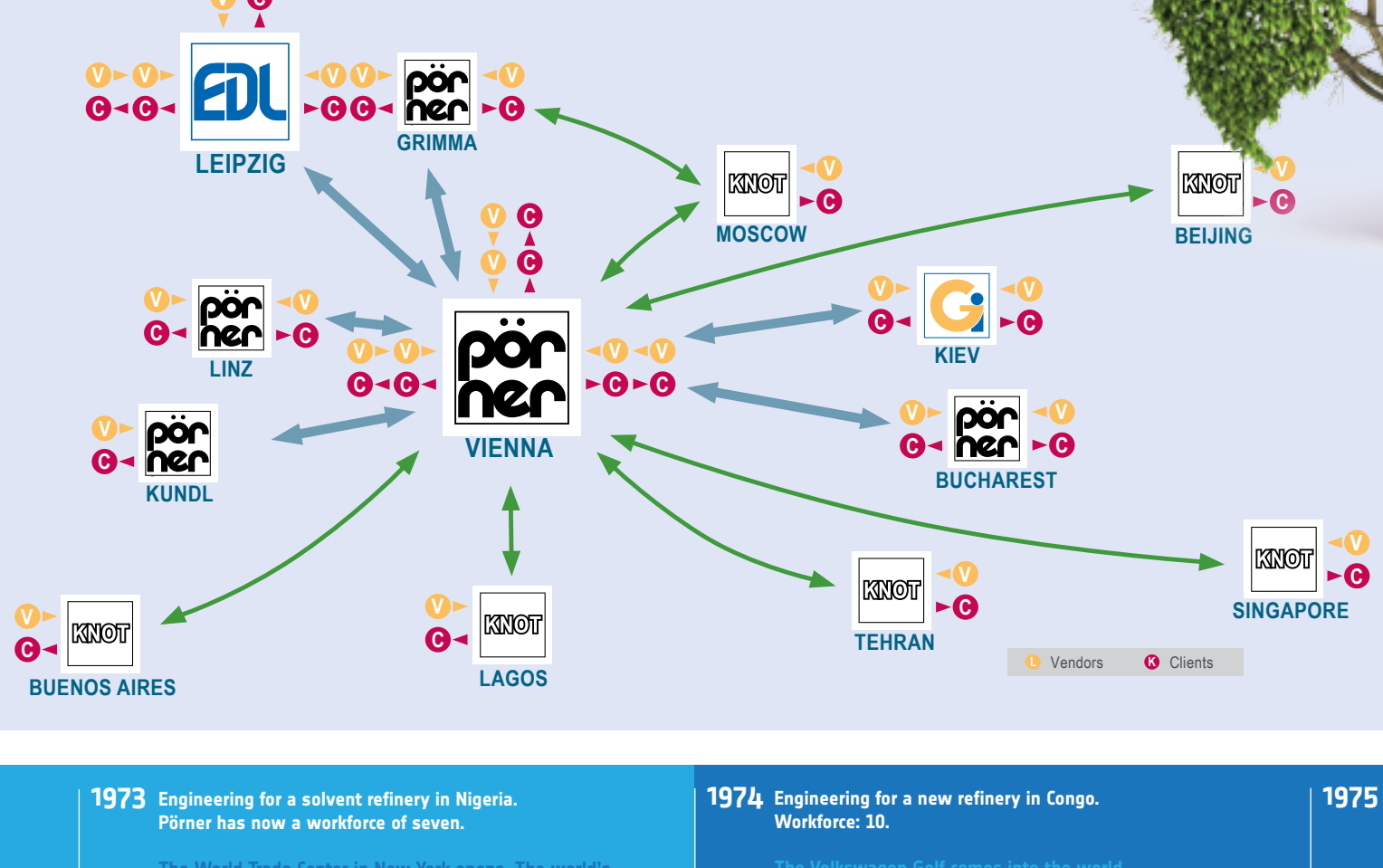
The full-service plant engineering was bound to occur by the jobs awarded and the constantly growing number of staff.

What is in your eyes the most innovative development since the foundation of the company?

There are several things: First, the installation of the sales department controlling its own budget, the search for proprietary processes, the decision to open offices abroad and finally the courage to deliver turn-key projects.

Thank you for the interview.

The Pörner Group 2012:



1972 Ing. Kurt Thomas Pörner founds "Technisches Büro", a business of three, in Vienna with main focus on industrial piping.

The first game console called Odyssey is brought out by Magnavox. 'Rebellious' is the word of the year.

1973 Engineering for a solvent refinery in Nigeria. Pörner has now a workforce of seven.

The World Trade Center in New York opens. The world's first mobile phone conversation by Martin Cooper. Jackie Stewart becomes Formula 1 world champion.

1974 Engineering for a new refinery in Congo. Workforce: 10.

The Volkswagen Golf comes into the world. US President Nixon stumbles on Watergate. The Football World Cup is held in Germany.

1975 First branch offi
partner of the l
(VÖEST, Linzer S
230,000 die in 6
Paul Allen estal
Niki Lauda wins

Growth to Success

BASED ON TRUST. *The Pörner Group did not start out at a garage like other successful businesses in the last few decades but was similarly small.*

VIENNA (ap). Everything began at the "steel constructors' office", a ground-level ancillary building at the VÖEST premises. In 1972 Kurt Thomas Pörner ventured to set up an engineering office with three employees.

The next 40 years saw the emergence of the Pörner Group, an independent medium-sized company for process plant engineering in Central Europe which currently has a staff of about 500 at seven locations in four countries.

Where lies the secret of Pörner's success?

How is it possible that a small three man undertaking could grow to become a global player in process engineering within 40 years? Why did Pörner prosper while other plant engineering firms closed down in the rest of Europe?

In brief: Pörner has always stood for a "decisive extra" in engineering services, productivity, innovation and flexibility.

Planning strategically

From the very beginning the small Austrian market required flexibility and versatility. A lot was learned from the initial large-scale projects, the detailed designs for refineries in Congo and Mauretania. It did not take long for the young team to establish as an engineering partner for the refining industry, power plant construction and many other industrial customers (e.g. pulp and paper, alcohol, chocolate). Just three years after its foundation the company opened an office in Linz. This office became the competence centre for plants of the steel industry.

The right choice

In the early 1970ies ÖMV approached K. Th. Pörner to market the Biturox® Process developed in Austria for the production of quality bitumen in refineries outside the country. A cooperation agreement was signed. In 1978 the first licence for Biturox® was granted to Mobil Wörth, Germany. It turned out soon that this process was an excellent niche for Pörner and over the years it became a hit worldwide. And that is how it came that the staff had grown to 100 when the company celebrated its 10th birthday.

The change

Shortly after the political change Pörner seized the opportunity and opened an office near Leipzig in 1992. Pörner Grimma has meanwhile established as a specialist for specialty chemicals, formaldehyde and its derivatives. Their main focus is the planning and delivery of chemical plants in Germany and Eastern Europe. Pörner Grimma has made a name of itself as a German plant exporter in an interesting niche.

In 1992 Pörner began sending its engineers to Kundl. The Tyrolean team has specialized in pilot and small-scale production plants as well as cleanroom technology and plant certificate for the pharmaceutical industry.

Headquarters of the Pörner Group in Vienna

Milestones

A milestone in the company's development was reached in 2003 with the acquisition of the Leipzig-based EDL. The engineering capacity doubled by this move and the process competence was vitally strengthened. In the meantime EDL has become a firm alliance and engineering partner of the German refining and chemical industry. Customers appreciate the process competences and the proverbial German quality of engineering services when it comes to new plants and revamps and implementation of new process technologies.

"If we weren't an excellent engineering office, the wind of change had blown us away long ago."

Kurt Thomas Pörner, 20 years ago

Eastern Europe

In 2005 Pörner initially took over 70 % of the Ukranian engineering firm Gazintek from the French Tecnimont-subsidiary Sofregaz. In 2007 the remaining 30 % were acquired by Pörner and so it strengthened its commitment in Eastern Europe even further. This office is primarily involved in planning processes for renowned western gas firms and supports Pörner Vienna and Grimma in delivery projects in the Russian-speaking area.

Another engineering office was opened by Pörner in Romania, in Ploiesti to be exact, the centre of the oil industry, in 2006. With the usual quality in process engineering and project execution Pörner quickly established itself and has now 45 employees.

The Pörner Group has been very successful in Eastern Europe in the last few years with bitumen and chemical plants built in Poland, the Czech Republic, Hungary, Russia, Azerbaijan and Turkmenistan.

Specialists and Synergies

The Pörner offices have become centres of competence for refinery process plants, steel mills, bitumen technology, chemical resins and derivatives, pharmaceutical industry and gas processing. The huge pool of experts and planning capacities for process plants is a solid foundation for the trust first-class customers place in the Group.

To be able to render world-class services and supplies, the Pörner Group creates optimal working conditions for its specialists to enable them to do their job with maximum personal responsibility. They have a close and long-term working relationship with the best partners and suppliers of the branch on global scale.

This Pörner network of engineers combines the strengths of the individual and creates synergies through the extensive knowledge of its own specialists and that of customers, alliance partners and suppliers from all over the world.

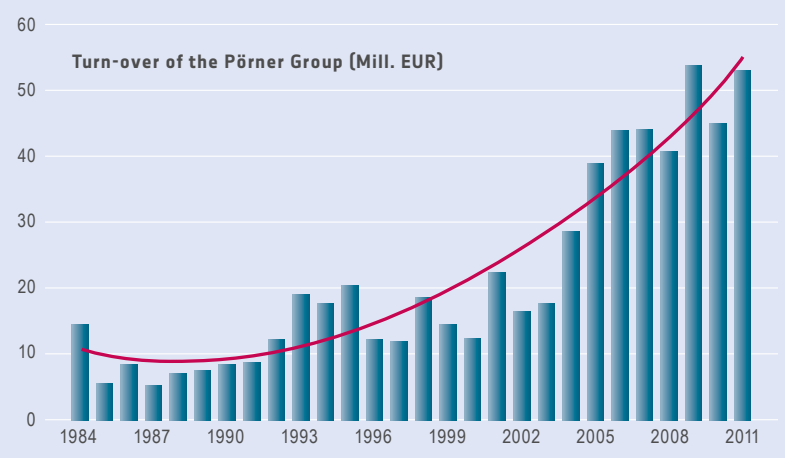
A network of engineering competence

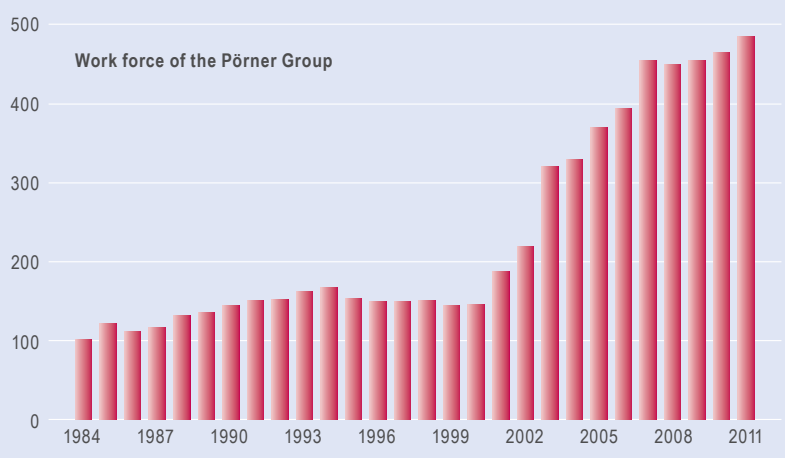
CEO:
DI Andreas Pörner,
DI Peter Schlossnikel

Offices:

1975 Office Linz
1992 Office Kundl
1992 Pörner Ingenieurgesellschaft mbH (100 %) Grimma, Germany
2003 EDL Anlagenbau Gesellschaft mbH (100 %) Leipzig, Germany
2005 JSC Gazintek (100 %) Kiev, Ukraine
2006 S.C. POERNER ROMANIA S.R.L. (100 %) Ploiesti, Romania

Total capacity:
600,000 engineering hours / a





Specialization:

- Refinery
- Bitumen
- Chemical industry
- Petrochemical industry
- Gas industry
- Energy & Environment
- Pharmaceutical industry

Sales 2011/2012:
approx. 54 mill. Euro
Within a period of 25 years the Group's sales increased tenfold. The ups and downs clearly show the dynamics of the plant engineering and delivery business. The positive development of sales illustrates the growing project volumes the Pörner Group has been entrusted with and is the result of the high standards the Pörner engineers have set themselves.

Work force 2012:
approx. 500
The healthy growth as a medium-sized company with little fluctuation leads to a balance between "old hands" and "young ideas".

ce in Linz, initially mainly engineering
ocal, state-owned industry
Stickstoffwerke).
51 dam failures in China. Bill Gates and
blish Microsoft.
s the Formula 1 world championship.

1976 Assistance in engineering for an alcohol and feed yeast production plant in Santa Cruz/Cuba.
Germany introduces the requirement to wear a seat belt on the front seat. XXI Olympic Games in Montreal.
The Cultural Revolution in China ends with Mao Zedong's death. Steve Wozniak develops the Apple I.

1977 Power failure in New York resulting in a baby boom.
Germany decommissions the last steam engine. Elvis Presley, the King of Rock 'n' Roll, dies on August 16.
Niki Lauda becomes Formula 1 world champion on Ferrari.
Jimmy Carter becomes 39th President of the USA.
The Apple II enters the market.

1978 Cooperation agreement with OMV for the Biturox® process developed in Austria and two ...
The "year of the three popes" brings forth Paul VI, Johannes Paul I and Johannes Paul II. ...

EDL Anlagenbau Gesellschaft

MANAGEMENT: *Roland Ludwig and Wolfgang Kursch*

The beginnings of EDL Anlagenbau Gesellschaft mbH date back to 1991 when a unit of former Chemieanlagenbaukombinat Leipzig-Grimma (CLG) became a wholly-owned subsidiary of EDELEANU Gesellschaft mbH Alzenau (RWE Group).

On January 1, 2003 the Leipzig-based office, what is now EDL, was acquired by the Pörner Group, and so Leipzig's 70-year-old tradition of plant engineering and construction lives on.

As a medium-sized company EDL is firmly integrated in the Pörner Group and provides services mainly for refineries, the chemical, petrochemical and gas industry both in Germany and elsewhere.

As an EPC contractor it focuses on process engineering and has a specific process know-how when it comes to refineries, luboils and selected areas of the chemical industry.

With a work force of about 150 EDL has become the largest office after the Vienna - based parent company. The team is made up of highly motivated specialists with long years' experience in all engineering disciplines such as process, mechanical, layout, civil/structural, piping, project management. Long-time permanent staff and young engineers provide for a healthy mix where experience meets fresh ideas.

EDL is a reliable partner and undertakes everything to do with plant engineering and construction from conceptual design and execution through to commissioning of sophisticated industrial-scale process plants. EDL is also a plant revamp specialist and has completed over 40 revamp projects. Custom-tailored solutions for conversion are developed together with the client and implemented within the shortest possible time and in high quality. In 2011 EDL celebrated its 20th birthday.

Pörner Linz

MANAGEMENT: *Eugen Gotter*

Pörner Linz can look back to 37 years of experience in process plant engineering and realization of numerous projects at home and abroad. The office was founded in 1975 primarily as a planning partner of the local, then state-owned industry (today voestalpine GmbH, Siemens VAI Metals Technologies GmbH, BOREALIS Agrolinz Melamine GmbH). Throughout the course of the company's history the office developed from a pure design office to an engineering office providing services for all sectors of industry. And indeed it has been very successful: for the general planning and construction of the high-tech catalyst plant in Qatar Pörner Linz was honoured by being nominated for the 2008 Austrian State Prize for Consulting.

Opening ceremony on June 1st, 2012. (left to right): CEO's A. Pörner & P. Schlossnikel, Town councillor S. Wegscheider and Head of Linz Office E. Gotter

Today Pörner Linz is a competence centre for industrial piping with main focus on media supply and infrastructure, and specialist for complete systems especially taking into account the needs of medium-sized companies and providing custom-tailored solutions. The project implementation know-how attained over the years benefits Pörner's repeat customers. Among them are world-renowned companies such as voestalpine, Siemens VAI Metals Technologies GmbH, AGROLINZ Melamin GmbH (Borealis), DSM Chemie, Nufarm, Tannpapier, Colas GmbH, Hexcel GmbH, Büsscher & Hoffmann GmbH and Süd-Chemie AG.

The lean organizational structure provides for a cost-efficient handling of small and medium-sized plant projects. The service portfolio includes all engineering services for which most advanced 3D design tools (PDMS), approved calculation programs (CÄSAR II, Rohr 2) and adequate reporting tools are used. To provide sufficient space for the 35 employees and be ready to meet future requirements, the office moved to the MediCent Linz, Untere Donaulände 21-25 in April 2012.

Pörner Kundl

MANAG.: *Martin Embacher*

A member of the Pörner Group based in Kundl, Tyrol is the competence centre for pharmaceutical plants and industrial building services. The planning of pharmaceutical process plants and clean room systems as well as industrial and local building services has been Pörner Kundl's business for over 20 years. Special mention should be made of the close relationship with the global pharmaceutical manufacturer Sandoz.

The early days of successful cooperation date back to 1992 with the first contract being handled by the office at Linz.

The independent Kundl office opened in 1999 and a year later they moved into a new office building with a space of 200 sqm at Mühlbachweg 11 and installed its own electrical/I&C department. The number of staff has increased continuously as has the circle of customers, such as Swarovski Optik, Swarovski Kristall, Tyrolit, Fraunhofer-ISC, Agrana and Borealis. A specialty is the independent planning and rehabilitation of lift systems.

In 2012 the number of employees has risen to 15 from initially five. At Pörner Kundl all services required for the engineering and construction of complete pharmaceutical plants are available from a single source: validation and qualification as well as planning of process plants, clean rooms, labs, HVAC and computer systems also including everything related to electrical/I&C systems. The services include all phases of a project from basic design, specification, tendering and order place through to commissioning and documentation.

1978 ... granting of licenses.
Messner/Habeler on Mt. Everest.

1979 Pörner becomes a limited liability company and moves to Hamburgerstrase 9 in the 5th Municipal District still being the domicile of Pörner Vienna.
Mice are cloned. The Khmer Rouge are defeated and expelled from Cambodia. Iran turns into a theocracy and Margret Thatcher becomes Prime Minister.

1980
Ronald Reagan becomes President. Mt. Saint Helens in Washington erupts. Summer time is introduced. Germany wins the European football championship. 85 people die in a bomb attack at the rail station in Bologna, Italy.

1981
The Jamaican musician Bob Marley dies on May 11. The first European solar power station starts operating on Sicily. The US disease control centre issues the first report on AIDS.
IBM presents the first Personal Computer (PC).

Pörner Grimma

MANAGEMENT: *Gerhard Bacher*

Pörner Grimma was the first foreign branch of the Pörner Group, founded on January 30, 1992 in the Saxon district town of Grimma. Its home was at a 140 sqm office in Leipziger Strasse 39. The objective of the first few years was to supply services for the nearby chemical and process industry by a fully integrated engineering office organized and structured as Pörner headquarters in Vienna.

Shortly afterwards a Joint Venture called "TPI Tecnimont - Pörner Ingenieurgesellschaft" was founded at the same place with TECNIMONT S.p.A, Milan, a long-standing partner of the Pörner Group.

The following years saw a rapid growth of the company. Soon the office became too small which is why a Wilhelminean style villa of 750 square metres built in 1903 was bought in 1994 and completely renovated.

Through large-scale projects undertaken together with Pörner in Vienna, such as the hydrogen peroxide plant for the MONTEDISON GROUP in Bitterfeld and the wheat starch plant of CERESTAR in Barby, it was possible to implement the world-wide recognized and proven 'Pörner quality' within a short space of time.

The TPI Joint Venture in Grimma ended with the polypropylene plant built in Schkopau in 1996 and both parties went separate ways again.

But the good partnership between TECNIMONT and the Pörner Group has persisted and is reflected by various joint large-scale projects, such as the PE plant at Schwechat, Austria realized in 2006.

Since 2003 Pörner Grimma has been the "competence centre for formalin and its derivatives". In cooperation with partners it grants licences, plans and executes through EPCM contracts the technology family of formalin, UFC, Hexamine, UF, MF, MUF, Novolak and alkyd resins. In the last few years plants of this line of technology have been successfully built and put into operation in Hungary, Germany, Austria, the Czech Republic, Russia, the USA and Canada.

Targeting new technologies: Research and development are actively fostered. A case in point is the development project with a US partner for a novel technology by which precipitated amorphous silicates are obtained from rice husks.

Pörner Grimma has a team of 30 proactive, highly motivated and well-trained employees continuously working on the extension of the range of services and optimization of its technologies. This strategy will safeguard the future of Pörner Grimma.

Gazintek Kiev

MANAGEMENT: *Claudine Riou*

ZAO Gazintek was originally founded in 1991 by the French Sofregaz, the Ukranian institute Ukrazproekt and a Russian institute primarily for the design and revamp of gas plants. In 2005 the Pörner Group acquired 70 % of the Gazintek shares from Sofregaz. It enabled the Pörner Group to extend its network of engineering firms specifically with regard to the booming markets in the Ukraine and Russia. Since then several projects have been undertaken in cooperation with other members of the Pörner Group, such as the Biturox® plant at Nizhnekamsk/Russia in 2006. At the turn of the year 2006 the Pörner Group acquired the remaining 30 % in Gazintek to strengthen its presence in Eastern Europe on an independent basis.

Since 2005 Gazintek has quadrupled its sales and the number of employees has risen from 27 to 46. The company is now specialized in engineering services for the oil and gas industry and 3D design of piping, building services and electrical / I&C. Its portfolio also includes stress analyses. The team's experience is particularly useful when it comes to planning and design of LPG tankers, LPG and oil production terminals, complete pipeline systems, gas stations and the detail engineering for international process plants.

State-of-the-art design methods, in-depth knowledge of international standards and the ability to carry out jobs by advanced software flexibly and expeditiously add to that.

Projects such as the protection of the Chernobyl nuclear plant or the design package of an oxygen plant at Alchevsk are first-class references for the execution of demanding projects. A great number of employees is multilingual (Ukrainian-Russian-English). It is reflected by the growing number of western European contracts now undertaken by the Kiev team. Many a time Gazintek had to pull the chestnuts out of the fire for its customers in major international projects when local planning services turned out to be insufficient, for example, which makes them feel proud.

Pörner Romania

MANAGEMENT: *Michael Volkmann*

The Pörner Group has been actively engaged in Romania since 2006 and founded the S.C. POERNER ROMANIA S.R.L. with its principal office in Bucharest. The operative office is based in Ploiesti, the centre of oil and gas sciences.

This group member has developed very positively. The number of staff of initially four has grown to 45. All disciplines (incl. ISO 9000, procurement, HSEQ, site supervision and civil) are available to provide services from pure engineering through to turn-key plants from a single source. The execution know-how, the national relations and synergies and most notably the knowledge of how to apply the Romanian norms and laws are key advantages of the Romanian Pörner team. It has become a preferred partner for the refinery, petrochemical and gas technology sectors when it comes to process engineering services.

In 2011 Pörner Romania was entrusted with the revamp of an LPG plant. As general contractor the project team was in charge of the basic and detailed engineering, permitting, procurement and the management of structural adaptations. For the basic engineering the complex plant model was simulated digitally and optimized to design the individual components so that greatest possible efficiency of the entire plant was achieved. Another three EPCM contracts could be obtained and are currently being implemented.

In the seven years of its existence Pörner Romania has undertaken over 200 projects, won important regular customers, such as PETROM and WABAG and thus ensured a constant workload. A real gem is the Pörner office at Hasdenau Street in Ploiesti, the domicile since 2010. A completely renovated 650 square metres Victorian style villa providing space for almost 50 employees and new projects.

1982

Italy wins the World Football Championship in Spain. ABBA separates. The Commodore C-64 is sold on the market. The first artificial heart is implanted and the patient survives for 112 days.

1983

French actor Louis de Funès dies.
Microsoft launches the 1.0 operating system, and Motorola presents the first mobile phone.

1984

The Indian Prime Minister Indira Gandhi is assassinated.
A catastrophic drought in Africa affects 20 countries.
Niki Lauda becomes world champion of Formula 1.

1985

The Pörner family

CORPORATE PHILOSOPHY. *The founder, Kurt Thomas Pörner, gathered former colleagues and school mates in 1972, and therefore the working atmosphere has been a very amicable one from the very beginning.*

VIENNA (ap). Besides concentrated work in the first years the colleagues did a lot of sport together and even spent holidays together. In the last 40 years hundreds of new employees joined the company, from different countries and cultures. Though no longer being a small business the company has been able to maintain its family-like character of a medium-sized business.

Offerings for employees

Pörner keeps a flat hierarchy: much freedom of action for the individual promotes the sense of responsibility for the tasks entrusted. Modern offices and latest equipment as well as friendly relations are prerequisites for a productive working atmosphere.

Good and satisfied employees are an asset for an engineering service provider. Adding to that is permanent training, be it seminars for project managers, courses teaching the use of software tools and the ones organized by TÜV. And not to forget the first aid courses and the chance to improve language skills which are appreciated by the employees.

Everyday work and corporate philosophy

Based on the experience gathered from thousands of projects Pörner has developed its own working culture. The very personal direct communication of all staff members is a key element. It is the joint morning coffee, for example, where both social and unbureaucratic, work-related exchange of information takes place.

The Christmas staff party is held every year at selected locations in Vienna, and all employees and their partners as well as the managers of the foreign subsidiaries are invited.

The managers of the group members meet once a quarter at different places to discuss and coordinate their strategies and cooperation.

The Pörner Club

The Pörner Club, a regular meeting of Pörner employees in Vienna, has established itself as an institution. Usually upon completion of large projects and at the beginning of summer lectures and "open-end" cosy get-togethers are organized. To this end the inner courtyard is turned into a "Heuriger" (Viennese tavern selling homegrown wine), a beer barrel tapped, a pigling consumed and danced. This much-loved way of celebrating has meanwhile become a model for other group members.

The corporate newsletter

To keep as many employees at all offices and construction sites as possible updated on corporate life, Pörner issues a newsletter at regular intervals in German and English. It informs about current projects, events, new staff members but also pleasing news, such as marriages and childbirths ...

The photo platform

The Pörner employees are not only specialists when it comes to work but also go in for different kinds of sport together, indulge in hobbies and other activities. During a company outing to the island of Crete the idea of an internet platform for private contributions and photos came up. Everything is documented, from company parties, cycling tours through to badminton or football tournaments.

Pörner company outings

Pörner company outings are always very special. In winter these are the annual skiing weekends where sportsmen and "kibitzers", active and former staff members meet to run downhill and enjoy après-ski.

In summer these are the works outings. This year it was the seventh time that Pörner invited the Austrian staff to join an outing abroad. The first outing took place 24 years ago, in 1988. The spectacular journey to the Greek island of Skiathos has been kept in good memory. By a charter flight the participants went from Vienna to Thessaloniki, on it went by bus to Volos, from there to Skiathos by hydrofoil and finally by bus to the hotel. At dinner people were more inclined to sleep than enjoy the meal.

One learns by experience, the next destination was easier to reach, Kemer on the Turkish Riviera, Sorrent at the Bay of Naples, Chania on Crete, Cairo in Egypt and Palermo on Sicily. In the anniversary year 130 participants went to an island again – Majorca – where besides a joint gala dinner a still somewhat cool sea and the varying Mediterranean landscape provided for nice experiences.


Majorca 2012


Egypt 2005

1985 The wreck of "Titanic" is discovered. "Tetris"conquers the PCs and becomes the most successful video game

1986 Space shuttle "Challenger" disintegrates killing all seven astronauts. The reactor of Chernobyl explodes. Argentina becomes world cup champion.

1987 The portfolio is extended by Pörner+Partner for Civil Engineering. Michael Rust lands in a Cessna 172 near the Red Square in Moscow undetected. Ferrari celebrates its 40th company anniversary.

1988 The first Gulf war between Iran and Iraq The first computer worm "Morris Worm" 10 percent of all networks.

THE ENGINEERING SAILING CUP 2012

Pörner Group always ahead

TURKEY (ps). Early in May the Engineering Sailing Cup took place for the 4th time.

In the bay of Göcek, Turkey the crews of 10 sailing boats met as every year for a six-days' regatta. The ESC-Engineering Sailing Cup maintains the original idea: strengthen the friendship and cultivate the contacts among engineering firms.

Ten boats and about 60 sailors from Germany, the Netherlands, Switzerland, Great Britain and Austria joined the event. And most importantly: they sailed, fought for places and partied.

At the Prize Winning Party the Pörner Crew received silver medals. With two wins of the day and two second places it was a close race against the English/Dutch crew for the overall win.

Fair winds until next year!

Crew: Eugen Gotter (Skipper), Wolfgang Kursch, Klaus Prexl and Peter Schlossnikel

Pörner Christmas party 2006: Vocal Andreas Pörner, Bassist Gerhard Preisel (Pörner Vienna) and Peter Sonntag (EDL) at the trumpet perform the specifically composed Pörner song.

„Chief" Andreas Pörner at the Yankara market in Lagos, Nigeria (1985)

Sunnyboys

1989 Fall of the Berlin Wall. Massacre in Beijing on Tiananmen Square. "Freedom of travel" is the word of the year.

1990 One litre of petrol costs between 1.20 and 1.60 DM. Michail Gorbatchev is elected president of the USSR. The Hubble Space Telescope is put into orbit. The global Human Genome Project for genome sequencing is founded. The CERN starts the first prototype system using HTTP, HTML and the combination of web server and web browser on a NeXT computer.

1991 Award of the Austrian State Prize for Consulting for the wastewater project Funder Werk 1.

Operation "Desert Storm" liberates Kuwait from Iraqi troops. Ötzi is found in the South Tyrolean Alps. The long-haul aircraft Airbus A340 takes off for its first flight.

Then & Now

INTERVIEW WITH GOTTFRIED RATZINGER

Piping, Barbecues and Slide Rulers

Two of the longest-serving employees of the company are the engineer Gottfried Ratzinger (37 years of service), head of the piping department in Vienna, and his wife (35 years). They were among the first and have therefore a lot to talk about.

Mr. Ratzinger, you can be called an old hand at the company and have seen and witnessed a lot. What remained unchanged at Pörner's?

The founder, Ing. Kurt Thomas Pörner, has always been aware of the importance of a good working atmosphere. Besides well equipped workplaces loyal and productive cooperation were promoted by regular get-togethers, such as the Pörner Clubs, barbecues, Christmas parties with spouses, skiing at weekends and staff outings still being an essential pillar of corporate life.

What has remained the same in the working process is that we still use classical tables from the early days for isometric drawings.

Where do you see the most radical changes?

Three aspects come to my mind in this connection: personal, corporate and strategic. The biggest change came with the computer-aided work which is indispensable today, whether it is design, calculation or data transmission to clients and suppliers. Due to the size of the company it is unfortunately no longer possible to know each individual employee personally. In the first few years we were like a big family. Strategically the fall of the Iron Curtain was the trigger for Pörner to establish additional offices and win new customers.

You mentioned already that the way of working has changed radically. Which tools did you use for calculations in the early days?

Back then we partially used slide rulers, later pocket calculators but due to a lack of a memory all operations had to be entered anew. The first computers had neither a memory nor programmable formulas. Today we use fully programmed tools for pipe tension and component calculations as well as special pressure drop programs.

Couple Ratzinger 1976 and today with Granddaughter Hannah.

Many a medium-sized company was unable to weather the market cycles in the last four decades. Why do you think it was possible for "Technisches Büro Pörner" to grow and become the Pörner Group?

There are several reasons of which the most important one in my opinion is the company's pursuit of further development. The former design office for piping became a fully fledged plant engineering and construction firm with all disciplines needed to undertake projects including supply and lump sum turn-key projects. Secondly, the founder's basic idea that only satisfied employees are motivated and committed has been carried on. Thirdly, much competence and experience could be gathered through undertaking numerous, sometimes tricky projects. Fourthly, the management took the right strategic decisions at the right time, such as the establishment of different offices, specialization, taking licences into the portfolio and last but not least regular investments in advanced work equipment to remain up-to-date.

Thank you very much for the interview, Mr. Ratzinger.

From manual work to computer

Back in 1972 when the company was founded all correspondence was written on a typewriter and the only tool for correcting typing errors was Tipp-Ex or simply re-writing it. Copying machines were the first, very expensive achievement in these years.

It was not before 1980 that typing systems with memory disks of 12 KB were used. The first PC was bought by Pörner in 1985. The then brand-new high-tech gadget had a five MB hard disk and was as expensive as an S-Class Mercedes, namely 256,000 Austrian Schillings.

The calculations needed for a project were done by hand, and in case of currency fluctuations (Dollar, D-Mark, Schilling, Lira etc.) all estimates had to be adapted accordingly. Processes were designed based on arduous calculations of formulas.

Drawings were made on the drawing board. Minor changes were made by scratching out the lines on original ink drawing using a razor blade. In case of major changes the entire drawing had to be redone. At the repro shop they were copied as blueprints but not more than five copies could be made in one go. The repro shop and the archive were indispensable departments. The smell of ammonium chloride, the most important ingredient of blueprints, was omnipresent in the offices. For one project it took hundreds of copies to be made by hand before the final documentation including all revisions was issued.

Today dimensions are entered via the keyboard, calculations and drawings generated by computer programs and output by a plotter whatever size is needed. Copies are made at the touch of a button small or large, one or many in a matter of minutes.

1978

INTERVIEW WITH WOJTEK WILCZYNSKI

Model making in the year one

Before the computer age took hold a model was indispensable for plant construction. Mr. Wilczynski, over many years you had been responsible for model making – a skill that is as good as dead. What was the function of a model in plant construction?

First and foremost a model was used to check the feasibility of the engineering drawings. Since only elevations and cross sections could be shown on separate drawings, the model was the only way to depict the design three-dimensionally and true to scale. For piping model making was indispensable because the isometric drawings and piperacks needed the model as the basis. There were three different types of models.

1. The layout model - on a scale of 1:50 or 1:100. It consisted of expanded polystyrene, was inexpensive but nevertheless informative. It was used to define the location of future plant parts at an early stage of design and optimize the space required.

2. The planning model - on a scale of 1:33½ or 1:25. It was more detailed and time-consuming. All process, plant and operational details were shown true to scale. It included all pieces of equipment, piperacks, detailed piping, pipe routing including valves, measuring devices and supports. The underground ducting and piping was shown on the model base plate.

The planning model was used to define the isometrics of the pipes, coordinate the assembly and erection groups. It was accepted by the customer and used for the training of plant operatives at site.

3. The display model - was used to present the complete plant at trade shows, for example. It showed the entire industrial plant including all buildings, transport routes, outdoor facilities, lighting, planting etc. Under a plexiglass covering it often served as an eyecatcher at reception or conference rooms.

How was a model made?

Model making needed a lot of space. Some models, of entire refinery complexes, for example needed 5 x 10 m. They consisted of several sliding bench modules to ensure accessibility of the model.

Initially a basic model was built based on the plans of the pre-engineering study. As the project progressed plenty of changes had to be made. The basic models were made in-house. When it came to piping we went to the piping department then domiciled at Schönbrunnerstrasse in Vienna. The finishing touch was often put at the site directly. Some models needed up to six months.

Who mastered this skill and what was so difficult?

Back then there were only three firms in Austria who were specialized in industrial models, one of them was Pörner. The materials, such as prefab plastic components, plexiglass, films and varnishes were bought in the USA. To make a good model, you had to be creative and able to improvise besides the material. Our team made about 50 models in 20 years.

Since 1995 it has been possible to virtually simulate projects by computer programs. Initially it was difficult to handle and therefore customers' project managers kept preferring models. The last of its kind was made in 1998/99 for the melamine plant of AMG Linz (now the Borealis Group).

Thank you very much.

EDL IN THE REFINERY INDUSTRY

PDA plant for greater efficiency

The new propane deasphalting plant in Hamburg

H&R Ölwerke Schindler, a subsidiary of the SDAX listed H&R AG and specialized in the production and development of feedstock for chemical and pharmaceutical industries had a propane deasphalting plant (PDA) built up by EDL in Hamburg in the years 2010-2011. This plant is to obtain a so-called 'deasphalted oil' from vacuum residue by liquid propane extraction. The plant was designed to process 270,000 t/a vacuum residue.

As a first step EDL was contract awarded with the basic engineering. Based on the technical and commercial results (cost estimate) the contract for detail engineering as well as construction supervision and commissioning was signed.

The process

The heart of the plant is an extractor in which vacuum residue and propane run in counterflow. In this process the extraction products - deasphalted oil and asphalt - are obtained. The following process stages include propane separation and propane recovery for reuse. In doing so, existing resources are used efficiently and in an ecologically reasonable way. Moreover, the supply and purchase of fresh propane can be reduced.

Efficient planning

The PDA plant and further operational units and off-sites (e.g. compressor unit, fired heater unit, flare unit) were set up outdoors within existing production facilities.

The construction period was 13 months. Detail engineering started six months prior to the site opening.

It is especially worth mentioning that the plant delivered on-spec product from the very beginning. After successful completion of the performance test the project could be finalized to the full satisfaction of all parties towards the end of 2011.

EDL plans to further continue the theme propane deasphalting together with the Pörner Biturox®-asphalt-technology with international clients.

TURN-KEY REALIZATION

Pörner Grimma hands over Formalin Plant to Lanxess

The Pörner Group at its facility in Grimma, Germany, handed over a turn-key formalin plant in Krefeld-Uerdingen, Germany to Lanxess Deutschland GmbH after only 16 months of construction. The plant with a capacity of 150,000 t/a of formalin with 32 % concentration was ceremoniously inaugurated on April 24th, 2012 by Lanxess Division Manager Dr. Hubert Fink and the Lord Mayor of Krefeld. The total investment of Lanxess Deutschland GmbH amounted to more than 18 million Euros.

Opening ceremony on April 24th, 2012

Turn-key supply

The scope of services of Pörner Grimma covered the turn-key supply of the whole plant including authority engineering, basic and detail engineering, purchasing, logistics, construction, site management and supervision, commissioning and documentation.

Apart from the processing plant, which included a downstream thermal exhaust gas treatment and a heat recovery system, infrastructure-related equipment such as a methanol tank and a formalin double-walled tank, a formalin unloading facility and an extensive piping system to integrate the new complex in the existing infrastructure were supplied.

Dr. Fink expressed his gratitude to all companies involved for having efficiently handled the project under the management of the Pörner Group and met the budget and deadlines. He also mentioned that products were put out according to specifications from the first start-up. The guaranteed parameters as well as expected values in terms of methanol and energy consumption came considerably below the expected ones.

Technology package to preserve the environment

The technology provider was Dynea AS from Norway having been the Pörner's partner for many years. The decision of awarding Pörner Grimma with the plant construction and using the Dynea silver catalyst technology was taken after a detailed commercial and technical comparison between all formalin technologies being available on the market. The main criteria were:

- Safe and failure-free operation
- Environment friendliness
- Investment and operating cost incl. the catalyst cost
- Operability and maintainability
- Deadlines
- References

The process itself and the use of state-of-the-art equipment enables Lanxess to produce high-quality formalin in a very energy-efficient and enviromentally safe manner. Start-up and shut-down of the plant take place based on a unique adsorber process retaining all pollutants in the plant. Afterwards they are further thermally processed and disposed of in normal plant operation. Moreover, steam generated during formalin production is fed into the Lanxess TMP operation, thus providing a more or less self-sufficient energy supply to the plant.

Formalin Plant of Lanxess, silvercatalyst process

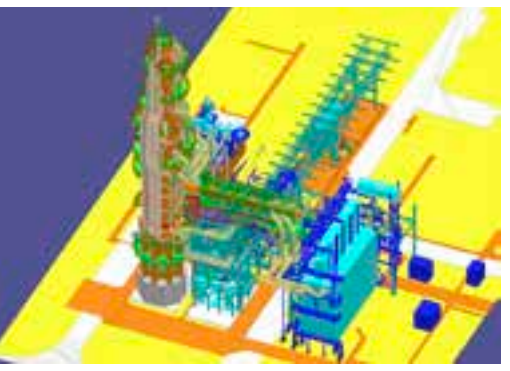
This is already the 11th plant successfully planned and put into operation by the Pörner Group and Dynea using the Dynea Silver catalyst technology. In the last decade formalin plants with a design capacity of more than one million tons per annum (37 %) were built based on the safest and most cost-efficient, state-of-the-art technology.

NEW CONTRACT FOR EDL

Revamp for PCK 2013

At PCK Refinery Schwedt it is time for the next shutdown: "Optimix13" will take place in 2013. Several plants will be revamped. Basis for a successful shutdown is a thorough planning and preparation in the long run. EDL has been awarded with specific tasks to be performed within two important core areas: the vacuum distillation unit 3 and the FCC plant.

The EDL team will engineer and put up a new vacuum column for Deep Cut operation (6.6 m diameter, 41 m height and 400 t lift weight) including all off-sites within the vacuum distillation unit 3, as well as the removal of the old and installation of a new reactor (6.1 m diameter, 48 m height and 426 t lift weight) in the FCC plant.



The replacement of the above mentioned equipment and parts is supposed to take place within 21 days in summer 2013.

To complete the task as fast as possible, two large-size cranes will have to operate at close range at the same time. The erection of the cranes as well as equipment assembly associated with all other installation and tie-in work will be another big challenge for EDL's "PCK team" in terms of logistics due to the short shutdown time.

ARCHITECTURAL COURSE

Civil Engineering from Vienna

In the 20 years of its existence the Pörner+Partner ZT GmbH has become a leading civil engineering service provider in Austria with specialization in industrial facilities.

This independent company was founded in 1987 by DI Pörner and DI Schlossnikel.

The range of references is impressive: from polyolefin plants to large-scale power plants at home and abroad, from classical factories to fuel stations and in addition to that non-industrial "outliers" such as the Kunsthaus ESSL museum and the refurbishment of a church by modern timber construction.

Winery Esterhazy, Trausdorf, 2006

At the end of March 2012 the "POEPA", as it is called in the Group, was affiliated to Pörner Ingenieurgesellschaft mbH. Thus, the company has its own C/S/A department of about 25 employees that covers the entire spectrum of construction planning (architecture, structural analysis, steel, concrete etc.). A specialty has always been that the civil department is actively involved in layout planning and performs the subsurface quantity planning of large-scale projects.

This integration has a lot of benefits, mainly in the organizational field. The companies will present themselves under the square Pörner logo.

Construction planning and quality assurance will be done separately by Pörner ZT GmbH with the authority for civil engineering and architecture.

There will be no changes for the customers in terms of project handling. All services will be provided in proven quality as before.

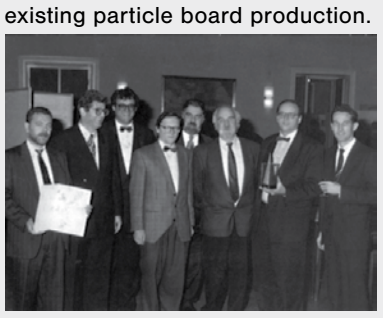
Project Highlights

Austrian State Prize: And the winner is ...

The Pörner Group is unique (not only) across Austria. Its valuable contribution to the development of industry and society is also reflected by the repeated award of the Austrian State Prize for Consulting for which the Group has been nominated five times and won two awards. The projects for which the prizes were awarded were also milestones in the company's development. Looking back with pride to:

1991

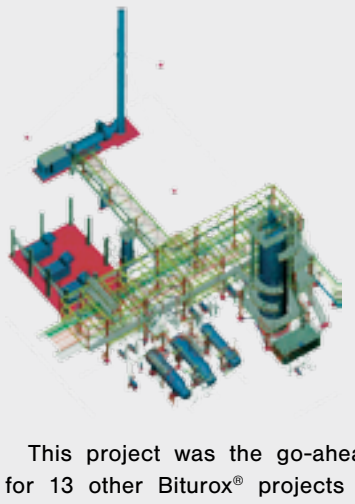
Award of the State Prize for the wastewater project Funder Werk 1
Pörner built a complex environmental protection facility within an existing particle board production.



What is state-of-the-art today used to be a showcase project, especially since the treatment of waste water provided the company with usable energy thus reducing the cost incurred. This project was also a major contribution to better water quality.

1997

Nomination for the turn-key Biturox® plant in Thailand
As general contractor Pörner built for the first time a complete Biturox® plant in Asia. The consulting services did not only comprise the granting of the license but also the entire planning and delivery of the bitumen oxidation plant to Thailand.



This project was the go-ahead for 13 other Biturox® projects in Asia and contributed a lot to the worldwide success of the Group.

2005

Award of the State Prize for the "Bitumen Bag" invention.
The large-volume, flexible Pörner Bitumen Bag made it possible for the first time to transport and store large quantities of cold bitumen in an ecologically responsible way obviating the need of special equipment.

The Pörner Bitumen Packing System reduces the packing costs by up to 70 %.

The integrated logistics solution has meanwhile become standard practice and provides bitumen manufacturers and suppliers of the road construction industry with a flexible and cost-efficient alternative for bitumen handling.

2007

Nomination for the turn-key bioethanol plant Pischelsdorf
As general contractor for the engineering of the bioethanol plant at Pischelsdorf Pörner provided all engineering services.

The possibly record-breaking

time limit of the EIA (environmental impact assessment) process (less than seven months) and the on-schedule completion (within 15 months) convinced both the customer and jurors of the extremely efficient project preparation and handling by Pörner.

2008

Nomination for construction of the catalyst plant in Qatar.
The plant that is unique on worldwide scale supplies advanced catalysts to the "Gas-to-Liquid" process plants in the Gulf region. Based on a process heretofore not yet tested on industrial scale Pörner delivered the concept, general plan and complete engineering. Besides the process engineering Pörner was also in charge

of construction supervision, construction management and commissioning at site. The project has been realized in a record time of 21 months.

From the highscore table of the last 40 years

1972 – 1981: Pointe Noire Refinery, Congo

In 1972 VÖEST-Alpine was awarded the first complete package for the refinery at Pt. Noire, Congo. After consultation with ÖMV the latter recommended Ing. K. Th. Pörner for the detail engineering. The small Pörner team of professionals and newcomers worked day and night for months at the "steel constructors' office: built the refinery model and provided the complete detail engineering. The almost impossible was managed and the reputation of the young company established.

1982 – 1991: Biturox® plant in Isfahan, Iran

In 1982 the NIOC National Iranian Oil Company ordered a Biturox® plant. It was the first refinery project of the young Islamic republic. For Pörner it was the first supply contract for a complete plant and the first granting of an international licence of the Biturox® process by Pörner. The plant with two reactors is still in continuous operation.

1992 – 2001: First high-pressure melamine plant for AGROLINZ in Linz, Austria and Castellanza, Italy

In 1998 Pörner was entrusted with a large part of the engineering for two melamine plants based on a new process of Agrolinz (now Borealis) in Linz and Castellanza. To produce melamine under high-pressure (280 bar) and high-temperature (420 °C) special materials and equipment are required. The piping design was a particular challenge for the engineers involved. The jacket pipe

high-pressure systems, for example, had to be heated by molten salt (liquid salt for pipes subject to high temperature requirements). It was still in the detail engineering phase that numerous new findings by the R&D departments for the new HP technique was implemented together with the process licensor Agrolinz. It was another project where Pörner proved its great flexibility.

2001 Formalin plant at Schwarze Pumpe, Germany

This plant was not only the first turn-key project in the new German Federal States but also the first plant based on the Dynea silver catalyst process, and thus became an important reference for the international marketing of this most advanced, safest and most economical process by Pörner Grimma.

Despite construction during the winter time the project could be completed within seven months, three months ahead of schedule. The time-tested Pörner handling principles (exact planning, minimum cost of material, well-planned installation/erection procedures) enabled this rapid project realization.

The successful partnership has lived on: the Pörner Group and Dynea have jointly realized eleven projects.

2002 – 2012 Large-capacity furnace revamp in Linz, Austria

The planning for this complex project of relining the largest furnace in Austria for voestalpine Stahl GmbH in 2004 began three years before. Pörner was in charge of the engineering for a complete new process control system and electrical systems and the mechanical conversion of the central blower system. The investment included new furnace lines, an improved cooling system and control system and process automation. Besides the upgrading of all ancillary systems a new steam turbine, the blast heater and over 1,000 pipes had to be planned and installed. The installation was completed within 105 days involving 500 people working in three shifts.

1992 Opening of the first foreign branch office in Grimma (Saxony). The office is specialised in general contracting for the engineering of large-scale projects for the chemical industry.
Maastricht Treaty is signed. Former Yugoslavia descends into civil war. Airbus A330 takes off for the first time.

1993 The European Union is brought into being. Germany gets five-digit postal codes. Frederico Fellini, Frank Zappa and Rudolf Nureyev vacate the world stage for ever. Las Vegas sees the opening of the $ 2.4 bn MGM Grand Hotel which has 5,044 rooms and is thus one of the world's largest hotels.

1994 Genocide in Ruanda. The Eurotunnel is completed. The Londoner Tim Berner-Lee introduces the World Wide Web - WWW. Sony presents the first game console - Play Station. Ayrton Senna dies in a crash during the Formula 1 race at Imola.

1995 Foundation of t
ZT GmbH" for in
Massacre of Sre
injured in a pois
wins the Formu

Project highlights of the Pörner Group by Industry Segments

Technological expertise and handling know-how of over 2,000 projects in 40 years are a solid foundation of competence and a "decisive extra" in productivity, innovation and flexibility, so much appreciated by customers. As a specialist in engineering and construction of process plants the company provides services in seven different segments.

1 | Bitumen

The Biturox® process has made Pörner Vienna market leader in the bitumen oxidation technology. As much as 45 licences have been granted worldwide and 35 plants built. Most of the leading oil companies run Biturox® plants with a capacity of about 10% of the global bitumen demand.

Pörner's specific know-how relates to a stable mode of operation, environmental compatibility and operational safety of this difficult medium. Thanks to that, process producers can use cost-saving feedstock mixtures from the refinery to make more and better bitumen at lesser cost.

Turn-key supply of Biturox® plant to SAMIR in Mohammedia, Morocco, 2011

2 | Refinery

The Pörner Group does not only provide full service from engineering, construction through to turn-key plants for many process areas of a refinery but is also a specialist in revamping plants, such as:

- Crude and vacuum distillation
- Hydrotreating (diesel, naphtha, vacuum gas oil)
- Gasoline isomerization
- Visbreaker
- FCC
- Delayed coker
- VGO hydrocracker
- Alkylation
- Tank farm and loading facilities (road tankers, rail tankers)
- Vapour return
- Process and safety concepts (flare calculations, design of safety valves etc.)

RD4 plant for OMV at Schwechat, Austria, 2010

3 | Petrochemistry

The strong process team of over 50 specialists using advanced engineering software enables the Pörner Group to customers of the processing oil industry custom-tailored solutions for complex plants (new or revamped) in accordance with the local standards.

Typical references:

- Polyethylene
- Polypropylene
- Melamine
- Plastics refining
- Polyester

Plastics Refinement Plant PBT/CBT for Cyclics Europe at Schwarzheide, Germany 2004

4 | Chemistry

Numerous projects and long-standing cooperation agreements with licensors are the basis of the profound competence when it comes to the planning and design of chemical plants for the production of:

- Formalin (based on the silver catalyst and metal oxide process)
- Formalin derivatives, such as:
  - UFC
  - Hexamine
  - Pentaerythritol
  - UF
  - MUF
  - MF
  - PF resins
  - Novolak and bakelite
- Synthetic resin
  - Bisphenol
  - Epoxy resin
  - Acetaldehyde etc.
- Catalysts
- Special-purpose plastics/chemicals

Polyester and alkyd resin plant for Spolchemie in Usti nad Labem, Czech Republic, 2006

5 | Gas

Gas storage plant Schönkirchen, Reyersdorf for OMV, 2008

Over the years each Pörner office has specialized in certain areas. The entire company benefits from the valuable know-how due to synergy effects. When it comes to gas the Pörner Group plans and designs LPG and LNG plants for:

- Natural gas treatment (pre-treatment, purification, drying, condensate separation, fractionation (LPG, naphtha), compression, cooling)
- Natural gas transport
- Underground storage facilities (liquid and solids separation, measuring/gas chemistry, compression, pre-heating, pressure control, cleaning)
- Gas condensate treatment
- Treatment of associated gas
- Air separation

6 | Energy & Environment

Plastics recycling plant for MBA Polymers GmbH at Kematen, Austria, 2006

In view of the scarcity of resources it is inevitable to focus on economy in power engineering and power generation from renewable sources.

The Pörner Group has been active in this field for many years and has expertise in the planning of:

- Production plants for fuels and fuel additives of biomass (bioethanol, biodiesel, biogas)
- Silicon plants based on rice husks
- Power generation and trunk heating power plants
- Water treatment plants
- Recycling plants

7 | Pharmaceutical

Pharmaceutical plant engineering needs specific expertise: processes, facilities, equipment and supply systems for the production of drugs and its raw materials must be validated and qualified and meet most stringent safety requirements and international standards (GMP, FDA).

The Pörner Group provides all services for the engineering and construction of complete pharmaceutical plants from a single source: From validation and qualification, electrical/I&C and HVAC, basic design, specification and tendering through to commissioning and documentation of:

- Pharmaceutical process plants
- Mechanical building services
- Clean room and ultra-clean room systems
- Pure and superpure water systems
- Fermentation systems
- Labs / Teaching labs

Mini fermentation plants for SANDOZ in Kundl, Austria, 2009

…he civil engineering office "Pörner+Partner …ndustrial plants.

…ebrenica. 12 people die and 5,000 are …son attack in Tokyo. Michael Schumacher …la 1.

1996 Dolly, the first clone sheep is born. Germany wins the European Football Cup in England. The chess computer Deep Blue defeats for the first time the world champion Garry Kasparov. British scientists believe that there is a connection between BSE and the Creutzfeldt-Jakob disease.

1997 State Prize nomination 1997 for the delivery of a complete Biturox® plant to Thailand. On the occasion of the 25th anniversary DI Andreas Pörner took the helm from Ing. K. Th. Pörner. The new leading team develops the Pörner Group to the leading engineering-network for process plant engineering in Central Europe.

1998 Monika Lewinsky becomes famous. France wins the World Cup in football. Windows 98 conquers the PCs and Viagra the male. The Ponte Vasco da Gama spans the river Tejo near Lisbon and …

THE LARGE-SCALE AGRANA BIOETHANOL PLANT AND FOLLOW-UP

Creating values b

2007 was the opening year of the AGRANA bioethanol plant at
As general contractor Pörner led this flagship project for the production of re
This large-scale project was the basis of diverse oth
ethanol feedstock/product chain at Pischelsdorf, thus crea

2007/08 | ORGANIKA 2 plant of DONAU-KANOL

In 2007 Pörner realized the ORGANKIA 2 project of DONAU-KANOL as general engineering contractor. This plant produces fluids, such as window cleaners and anti-freeze mixtures, which is filled into small containers. The architecturally attractive and functional workshop accommodates most advanced mixing, filling and packing equipment and has stores for empty containers and finished products as well as a packing and truck loading area.

2007/08 | ANORGANIKA 3 plant of DONAUCHEMIE

A year later the ANORGANIKA 3 project of DONAUCHEM GmbH was undertaken next door for the production of mixes, such as liquid fertilizers. This plant extending over an area of 9,000 square metres was also planned and designed by Pörner. Within this project Pörner was also responsible for civil and mechanical contract awards and the erection so that the plant could be completed on schedule in just ten months.

2007/8

Source: Google Maps. Aerial view of P

natürlich reines CO_2. AIR LIQUIDE

2011 | CO_2 recovery plant

At the turn of the year 2011 Pörner was commissioned by the French Air Liquide with the civil engineering for a CO_2 recovery plant. The crude gas is supplied by the neighbouring Agrana bioethanol plant. The carbon produced by fermentation is liquefied and processed e.g. for the foodstuffs industry.

Pörner was in charge of the engineering and construction supervision of the entire civil project and pipeline routing to five liquid gas tanks of 330 cubic metres each and four truck loading stations as well as a machine shop. At this plant carbon dioxide is fed to a second reuse cycle because the biogenic carbon is utilized rather than discharged to the atmosphere. Its annual production volume of up to 120,000 metric tonnes is a major contribution to a better environment.

2011

2012 | Offi

The latest co
this site is a n
building for th
NA Bioethano
It has a floor
2,000 square r
three floors. T

20

100 Mill. Euro +

In the 40 years since its foundation the Pörner Group has always worked on improving its capabilities and services, taken up new challenges, and managed them. Challenges cannot simply be picked up from the street but must be brought by the customers to the attention of the company. The magic word apart from competence is therefore trust:

trust in the company's performance.

Evidence of such trust is the growing value of individual contracts and the responsibility for the handling of increasingly larger and more complex projects amounting to 100 mill. Euro and more of investment values.

Such projects were undertaken repeatedly in the last few years – and always to the entire satisfaction of the customer.
(Roland Stickler)

1998 ... of 17 km and the longest bridge in Europe.

1999 The Kundl office is founded, the competence centre for pharmaceutical plans and industrial building services.

The Euro is introduced. The first kidney of a living donor is transplanted. Berlin is now the capital of Germany. 39 die in the Mount Blanc tunnel blaze.

2000 New offices at Kundl on 200 square metres and formation of an own Electrical/I&C department.

The Concorde crashes shortly after takeoff near Paris. The nuclear submarine "Kursk" sinks in the Barents Sea. George W. Bush becomes American President.

2001

Wikipedia, the first free encyclopaedia makes its first appearance on the Internet. In three terrorist attacks in the US as much as 2,973 people die and the Twin Towers of the World Trade Centre collapse.

PROJECTS AT THE INDUSTRIAL PARK OF PISCHELSDORF

by smart services

t Pischelsdorf/Lower Austria at the banks of the River Danube.
enewable energy to commissioning at the shortest possible construction time.
ner engineering jobs for production plants along the
ting a useful combination of integrated production plants.

Solid performance builds confidence
The Pörner Group as the general contractor and full service provider handed over the AGRANA bioethanol plant in Pischelsdorf on time and budget. After this success Pörner was awarded several extensions of the plant but also new plants for "neighbouring customers" in the industry park in Pischelsdorf in Lower Austria.
(Gerhard Vlcek)

örner's activities over the last six years.

AGRANA BIOETHANOL GMBH

2007 | AGRANA bioethanol plant

As general engineering contractor Pörner realized Austria's largest bioethanol plant for the AGRANA Bioethanol GmbH.

With a total investment of 125 mill. Euros it was the largest new industrial plant built in Austria in 2007, and by now it has been one of largest undertakings in the history of Pörner.

The annual production capacity of this plant is 240,000 cubic metres (190,000 tonnes) bioethanol. It is enough to meet Austria's entire demand for bioethanol to be admixed to super (in future up to 10 per cent – E10) by domestic production. Feedstock may be cereals, mostly wheat but also corn or syrup.

An essential by-product is the protein fodder "DDGS" (Dried Distillers Grains with Solubles) which made it possible to considerably reduce the import of soya fodder.

The use of renewable, domestic products does not only improve Austria's carbon footprint but also its trade balance because of lesser crude oil and soya imports.

Pörner realized the project in close cooperation with the AGRANA specialists and the process owner KATZEN (USA): basic engineering, authority engineering, environmental impact study, detail engineering including all tendering as well as construction and erection supervision, project management and commissioning.

The plant was successfully commissioned in late September 2007 in a record time of 14 months after commencement of construction.

In the meantime the plant has been extended and its capacity increased by Pörner.

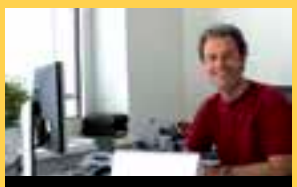
2007

ce building of AGRANA

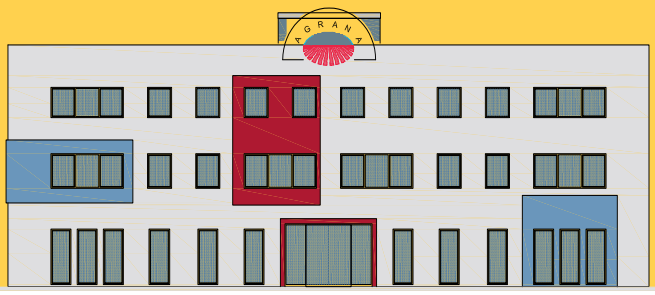
ntract at ew office e AGRA- l GmbH. space of metres on he build-

ing combines modern architectural design and the professional requirements of a large industrial operator.

The aim is to provide an optimal working environment for the employees at a balanced cost-benefit ratio and ensure future extensions.



Thomas Olbrich, construction engineering and architecture



012

Opening of the bioethanol plant with representatives of the management as well as from the State of Lower Austria and the Federal Government

Opening celebration

2002 Ten years of Pörner Grimma, major projects such as the hydrogen peroxide plant at Bitterfeld and a starch factory at Barby are realized for CRESTAR.
The Euro is introduced as currency.
Europe's so far biggest ecological disaster occurs off the Spanish coast.

2003 Acquisition of EDL Anlagenbau Gesellschaft mbH. The number of staff rises now to 280 with a capacity of about 450,000 hours.
Space Shuttle "Columbia" burns up upon re-entering the atmosphere. The second Iraq war begins. The last Volkswagen Beetle rolls off the line in Mexico.

2004
Bomb attacks on passenger trains in Madrid claimed 148 lives. Over 200,000 people die by a tsunami in the Indian Ocean. Thailand is affected. Greece becomes European champion.

2005 Birth of the Bitumen Bags. State prize 2005. Partial ...

Working hand in hand

PARTNERSHIP ON THE BASIS OF TRUST. *Clients appreciate Pörner's reliability.*

Trust between the client and the engineering firm as custodian of its interests is the basis of realizing all projects optimally in terms of engineering, on-schedule and budget-friendly .

The Pörner Group has gained the confidence of renowned refineries and chemical producers, such as OMV, PETROM, Borealis, PCK, Leuna Harze, Shell, METAFRAX, AGRANA and TOTAL and undertakes projects for them on a regular basis partially on the basis of alliance and skeleton agreements.

The Pörner Group itself can draw on a network of leading licensors and process partners, government agencies, suppliers, construction contractors built by the numerous joint projects that puts it in the position to realize even complex projects flexibly and to the entire satisfaction of the client.

Clients know and appreciate that they can rely on the Pörner Group. As proof they entrust Pörner time and time again with small and large projects.

A short list of our long-standing clients reads like a "Who is Who" of the industry.

OMV

OMV AG, acting globally in the oil and gas business with sales amounting to EUR 34.05bn and 29,800 employees is one of Austria's biggest listed industrial corporation. OMV has annual refinery capacities of 22.3m tons and over 4,500 filling stations in 13 countries. It runs a gas pipeline network of 2,000 km in Austria with the Central European Gas Hub that trades about 40 bn cbm per year being one of the most important gas hubs in Continental Europe.


OMV, Desulfurization plant HDS1, 2008

OMV and Pörner have a long-standing business relationship. Hundreds of projects have been undertaken together. Listing all of them would go beyond the scope of this article. Therefore let's mention only a few: Revamp projects such as the crude distillation plant RD4 (2010), hydrodesulfurization plant HDS1 (2008), debottlenecking of refinery gas plant (2008), revamp of the natural gas treatment plant Aderklaa (2008), underground gas storage facility at Schönkirchen (2008) and construction of a Biturox® plant (2006).

TOTAL

Not in Saxony but nonetheless in close vicinity to EDL is the home of the TOTAL Refinery Leuna. Immediately after the acquisition of the refinery by ELF in 2003 EDL was entrusted with several larger projects. Based on its experience gained in diverse refinery projects and its flexibility, quality and the locational advantage EDL could qualify for a long-standing cooperation.


TOTAL, Leuna Refinery Revamp, 2008

A short selection of projects: revamp of the visbreaker column (2004 – 2005) with extension of the life of the entire visbreaker plant connected with a higher conversion rate and greater flexibility; transfer line (2005 – 2007): implementation of a two kilometres long transfer line for gasoline; revamp of high-pressure steam generator (2007 – 2008) with replacement of the burners keeping tight shutdown times; several studies determining blow-off quantities of relief valves for different plants.

PCK

PCK Raffinerie GmbH at Schwedt/Germany has 1,100 employees and is one of the top-ranking companies in Brandenburg. As much as 12 mill. tons of crude are converted to mineral oil and petrochemical products every year. Main products are diesel, petrol, kerosene, liquid gas, fuel oils and bitumen. Other products are propylene and aromatic compounds as important base material for the plastics industry.


PCK, FCC-Overcracking, 2007

In the last 20 years EDL has realized major projects, such as the new FCC Overcracking plant (2007), revamp of the crude distillation plant TOP1 (2010) or revamp of the FCC gas concentration plant (2010).

LEUNA HARZE

Epoxy resins, reactive thinners, hardeners and ketone resin are produced by LEUNA-Harze GmbH in the new and upgraded plants and sold globally under the trade name of Epilox®. The products are tailored exactly to the needs of the customers. As much as 140 mill. Euros have been invested for this purpose since 1995.


LEUNA-Harze, Epoxy resin plant, 2007

In the past years EDL has contributed a lot to upgrade the capacities of this site: Engineering for the new epoxy resin production (LEUNA-Harze 1 -1998) and construction of two epoxy resin plants (LEUNA-Harze 2 (2002 and LEUNA-Harze 3 (2007), construction of two bisphenol F production plants (2005 und 2008) and increase of the reactive thinner production (2008).

BOREALIS

With more than 50 years of experience in polyolefins and the Borstar® technology this innovative company operates in about 120 countries. Borealis provides a large range of chemical products – from melamine and fertilizers through to phenol and acetone and is market leader when it comes to the development and use of plastics.


Borealis, Polyethylene plant, 2005

In cooperation with Tecnimont S.P.A Pörner was involved in the construction of the new large-scale polyethylene plant PE 4 (2005) and the general planning for the plant extension of a black colouring unit (2008), engineering support for a HDPE plant (2007), revamp of the polypropylene pilot plant (2010), planned two melamine plants in Linz and Castellanza (1999) and was awarded a large contract of the refurbishment of the Linz site (2010).

METAFRAX

Metafrax is the largest producer of methanol and its derivatives in Russia. The range of products is wide and covers formalin, pentaerythritol, urea formalin and polyamides, for example. The company is one of the largest Russian exporters sharing the export of about 50 % and supplies its products to Europe, Asia and South America.


Metafrax, Hexamine plant in Gubakha, Russia, 2011

The Pörner Group realized the formalin plant (2006), a novolak and powder bakalite plant (2010), hexamine plant (2011) and provided engineering services for the polyamide 6 plant (2009).


Several generations of the "Pörner Family" working hand in hand

2005 ... acquisition of Ukrainian Gazintek. Kundl extends its office and goes global.
John Paul II dies. A German is elected Pope. Angela Merkel becomes German Chancellor and the Airbus A 380 takes to the skies for the first time.

2006 15 years of EDL. "S.C. Poerner Engineering Services S.R.L." in Romania is founded with initially three employees. Today the workforce is 45.
Saddam Hussein is executed. A ferry disaster in the Red Sea claims over 1,000 lives and China puts the Three Gorges Dam into service.

2007 Acquisition of the residual share in Gazintek Kiev. General contractor for the engineering of a bioethanol plant of Agrana.
Nomination for State Prize.
Microsoft introduces Windows Vista. This year's winter is the warmest in Europe since the beginning of weather records.

2008 State Prize nomination 2008 for the complete engineering of a catalyst plant in Qatar.
The financial crisis which set in the year before causes the bankruptcy of a number of banks in the US and Europe.
Smoking ban at restaurants.
Spain wins the European Football Cup.

45 Biturox® Licenses from 1978 to date

No.	Issued	Client	Place
45	2011	NZNP	Novoshakhtinsk / Russia
44	2010	South Refinery Company	Maissan / Iraq
43	2010	ESSAR Oil Ltd.	Gujarat / India
42	2010	North Refinery Company	Kirkuk / Iraq
41	2010	SCOP	Nassiriya / Iraq
40	2009	SCOP	Kerbala / Iraq
39	2009	CEPSA	La Rabida / Spain
38	2009	SAMIR	Mohammedia / Morocco
37	2008	Parco	Qasba Gurjat / Pakistan
36	2008	Qatar Petroleum	Al Shaheen / Qatar
35	2007	Jey Oil	Esfahan / Iran
34	2007	Soroush Oil Refinery	Meerat / Iran
33	2006	Indian Oil Company Ltd.	Mathura / India
32	2006	Bharat Petroleum Kochi Refinery	Kochi / India
31	2004	OMV	Schwechat / Austria
30	2004	Paramo A.S.	Pardubice / Czech Republic
29	2005	ZAO TAIF-NK	Nizhnekamsk / Russia
28	2004	Banias Refinery Company	Banias / Syria
27	2004	MBW Mitteldeutsches Bitumenwerk	Granschütz / Germany
26	2003	Groupa Lotos S.A.	Gdansk / Poland
25	2003	BP Lavera	Lavera / France
24	2001	Gujarat Refinery	Gujarat / India
23	2000	SOC Simosa Oil Company	Mailiao / Taiwan
22	2000	Jarbit	Jaroslavl / Russia
21	1998	BPCL Mahul Refinery	Mumbai / India
20	1998	Chelyabinsk Area Administration	Chelyabinsk / Russia
19	1998	MPE Myanma Petrochemical Enterprise Ltd.	Yangon / Myanmar
18	1997	ESHA Smid & Hollander Raffinaderij	Amsterdam / Netherlands
17	1997	Visakh Refinery	Visakhapatnam / India
16	1996	Petrochemica Plock	Plock / Poland
15	1996	Mobil Oil Corporation	Joilet, ILL / USA
14	1995	OMV	Schwechat / Austria
13	1995	TPI Thai Petrochemical Industry	Rayong / Thailand
12	1995	Mobil Technology Company	Paulsboro, NJ / USA
11	1994	Baku Refinery	Baku / Aserbaidjan
10	1994	NEKRA	Krasnovodsk / Turkmenistan
9	1994	CPCL Chennai Refinery	Chennai / India
8	1993	TOYO / MRPL	Mangalore / India
7	1993	Mobil Technology Company	Melbourne / Australia
6	1992	Lisichanskij	Lisichansk / Ukraine
5	1991	Mobil	Adelaide / Australia
4	1990	NIOC National Iranian Oil Company	Bander Abbas / Iran
3	1989	CPC Chinese Petroleum Corporation	Kaohsiung / Taiwan
2	1988	NIOC National Iranian Oil Company	Esfahan / Iran
1	1978	Mobil Oil Wörth	Wörth / Germany

BITUROX®

Three Pillars of Global Success

The process

Bitumen is a complex mixture of substances with viscoelastic behaviour. The Biturox® process uses oxidation to change crude residues and other refinery feedstock chemically to become high-quality bitumen with the harmonic ratio of the chief chemical constituents (aromatics, resins, asphaltenes) determining the quality of the end product.

The ideal gassing takes place at a specifically designed Biturox® reactor. The highly efficient yet gentle blowing process preserves the valuable medium aromatics in the product.

The Biturox® process has decisive advantages to conventional bitumen blowing: Much shorter reaction time, exact control of process temperature and feedstock is converted continuously to become a homogenous product.

The know-how

For the production of quality bitumen it is essential to have the right know-how when it comes to the selection of feedstock, its mixture and processing. Initially focused on the mechanical equipment Pörner has acquired major competence over the years and collected data of several hundred test runs using crude from different parts of the world.

Pörner develops custom-tailored products in line with the market requirements, such as bitumen with optimized thermal susceptibility (both resistant to rutting at high temperatures and fatigue resistant at low temperatures). Efficient cleaning strategies minimize emissions in the reaction off-gas.

By proper design it is thus possible to produce cost-effectively high-quality bitumen grades from different residues produced at refineries.

The practice

To date Pörner has granted 45 Biturox® licences worldwide and planned and built such plants.

Most of the leading oil companies run Biturox® plants. Currently about 10 percent of the world road bitumen production is based on the Biturox® processes using a broad spectrum of crudes (the rest is mainly made by direct distillation of heavy oils with a lower yield of white products).

Compared to other refinery production plants a Biturox® plant needs less investment and can be easily run automatically in a modern refinery. By the smart Biturox® technology Pörner makes sure that more and better bitumen is made available worldwide for road construction that plays an important part in economy.

Part of Pörner from the beginning: Biturox®

„BITUMEN IS ONE OF THE MOST SIGNIFICANT MATERIALS FOR ROAD CONSTRUCTION WORLDWIDE."

Wolfgang Heger, Head of Sales

3D design of the two-reactor Biturox® plant in Novoshakhtinsk, near Rostov / Russia, to be handed over to the client OAO NZNP by the end of 2012.

2009 One of the longest and coldest winters with record temperatures of -30 °C. The Afro-American Barak Obama becomes President of the United States. Singer Michael Jackson dies at the age of 50.

2010 Pörner Romania moves to new offices in Ploiesti.

An earthquake in Haiti claims 200,000 lives. The oil platform "Deepwater Horizon" causes the worst ecodisaster in history. Sebastian Vettel is the youngest ever winner of the Formula 1 world championship.

2011 The Pörner Group has a workforce of 490 at seven locations in Europe.

Tsunami in Japan and Fukushima I. Terror in Norway claims 80 lives. Arab spring.
Stress test is the word of the year.

2012 The Pörner Group celebrates its 40th birthday.

XXX Olympic Summer Games in London. The SMS is 20 years old. Automaker Opel is 150 years old and Facebook goes public.

The Fascination of Process Plant Engineering

Process plants – the key to prosperity

VIENNA (ap). Though the public eye is less on the process industry than the auto or information industry it is a major element of an advanced industrial society.

The modern global society is not imaginable today without the quality products of the process industry: as is generally known power does not come straight from the socket but power plants, crude needs refineries to become premium-quality fuel, and practically all materials – from steel to plastics – as well as food and pharmaceuticals are produced at process plants.

The production plants are as multiform as the life itself and ensure growing prosperity of all people on earth.

To meet the enormous global need for such production facilities is the task of process plant engineering and construction specialists.

Fascinating plant construction – Cooperation of the best

Process plant construction is probably one of the most creative, well-organized and productive branches of industry. Unlike the automotive and aircraft industries its product – the plant – is always different. There are hundreds of processes implemented in process plants. In different countries, cultures and climates. This is why the engineers must be so flexible to be able to solve various tasks within a short span of time.

In complex plants a large number of companies and hundreds of persons are involved to make the project a success. Thousands of components are supplied and pieced together to provide a fully operational plant within the shortest possible time.

A case in point is the complete revamp of the OMV main distillation plant RD-4 at Schwechat that was managed within just 28 days of shutdown. As much as 800 persons worked at the site in shifts – well coordinated and no accidents.

Modern plant construction is the perfect example of a "cybernetic" collaboration between qualified engineers, equipment suppliers, construction contractors and the client.

The engineering office conducts, organizes and plans the overall project

How is it possible that an investment of over 100 million Euros can be operational in less than two years of construction? The answer is amazingly simple: because highly qualified people provide perfectly coordinated optimal services and components to create works being optimal in every respect.

„THE ART OF PLANNING IS TO ANTICIPATE THE DIFFICULTIES OF EXECUTION."
Christian Birgfellner, Project Manager

When so many specialists and contractors closely work together it needs a good overall management: by the engineering office or plant engineering and construction company commissioned by the client.

It all starts with the client's entrepreneurial idea

The engineering office and the client jointly define the concept, how to implement the project, which resources will be needed at what time and cost as the basis for a final decision. If after usually some time for consideration a positive decision is taken, everything has to go very quickly.

From the kick-off on it is in the hands of the engineering office to control, plan, organize, execute, check and coordinate all activities and workflows.

It is managed by applying the Descartes principle, i.e. splitting the works into many partial jobs (services and supplies). Every system, every component is dealt with by competent specialists.

In this process the plant construction contractor can benefit of the enormous concentration of suppliers in the last 25 years: those who have prevailed in global competition are almost all highly qualified. Therefore the function of every individual component, every system is guaranteed by strong, competent companies.

The engineering office merges all these parts to become one unit: organizationally by the project management, technically by engineers of the different disciplines, commercially by contract management and procurement. All this is done by people who have always focused on their specialist area – in a group like Pörner that has kept pace and grown with technological progress.

It is clear how plant construction goes

Design and execution, planning and construction of a plant are practically the same wherever you are, and perfectly clear for those skilled in the art. As experience teaches there is a logical sequence of all main activities when a process plant is built.

Plant construction is highly standardized. The structure of the disciplines is the same in every engineering firm. The handling and working methods are almost standardized and all elements (project structures, design and implementation documentation and equipment) are structured, classified and coded. The introduction of standardized plant construction in the 1920ies is ascribed to Rockefeller who used it to expedite the construction of his new "Standard Oil" refinery.

The existing standardization of equipment and materials has facilitated the development of advanced engineering software tools from the very beginning. Today there is special software for all disciplines, databases of technical and commercial content, the physical planning is done by smart 3D design tools.

The high culture of project executing lived by experienced specialists of the different disciplines helps to keep technical and commercial risks of plant construction under control.

More than in other businesses the client depends on its central partner, the engineering office and must fully rely on it. The engineering office must be capable of managing all parties involved in the project, all physical components and engineering activities.

What matters most

What counts most in life is also true for plant engineering: people, with expertise and social competence. There must be a right mix of all-rounders and specialists. Communication must be kept flowing.

From the client's perspective references come first, even before the price. Those who have built a plant before get "Brownie" points. The proof that it works has been furnished and thus that the firm masters its skills.

Plant construction is therefore a fascinating social orchestra involving many players: with its own systems, clear rules of the game and even own technical language. All instruments must play together if the master shall be known by his work. The engineering company takes the role of a conductor.

As experience shows, only qualified engineering offices with a fully integrated structure can fulfil the overall task of process plant construction efficiently - independent of suppliers' interests and reportable to the client only.

The Pörner Group has been able to win the trust of major customers through forty years of commitment to the task.

In 1900 it was common belief that everything had been invented already. Today we have taken the course of continuous improvement of all elements of plant construction:

- with better processes for products of specific properties
- with systems and equipment adapted more specifically to the applications
- with deeper planning and handling at the engineering office itself by more knowledge, better tools and participative social structures.

So, we, the plant engineers will never run out of work. We at Pörner are looking forward to building for our clients and their customers many useful process plants together with service providers and suppliers of our industry network, and thus make our contribution to boost prosperity in the world. 40

Sincerely Yours

40 years of Pörner mean 40 years in the industry that we were priviliged to help shape. Let us use this opportunity to sing a praise to our field of activity:
One of the most creative, best-organized and most productive sectors worldwide:

Process Plant Engineering!

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