



## Plastic as material

The price for so-called modernity



EDITORIAL

### Dear Partner,

This is already the fourth issue of our newsletter "Report", which is a regular update of the activities in our sector. It was our intention to choose this method, even though this type of communication is rarely used nowadays due to efficiency reasons. However, we feel it is important that you know what we are doing and this is why we spend time on you. We greatly appreciate that you take the time to read our news.

Nowadays, "environmentally friendly" is a concept embraced by almost anyone offering goods or services. Each time more people are convinced of the need to protect the environment, and therefore caring for the environment has become an important sales argument. However, who would actually like to buy something or have jobs performed if they were damaging to the environment?

The result is that the aforementioned techniques, materials and procedures mentioned in sales brochures give foremost consideration to our environment. Terms like energy-saving, sustainable, recyclable and nature-friendly are now usual practice.

Of course, we support this development provided the arguments are correct. Our products are environmentally friendly as well and we offer high technological quality.

In this issue of our "Report" you can read about the consequences of products which do not comply with the high requirements being marketed.

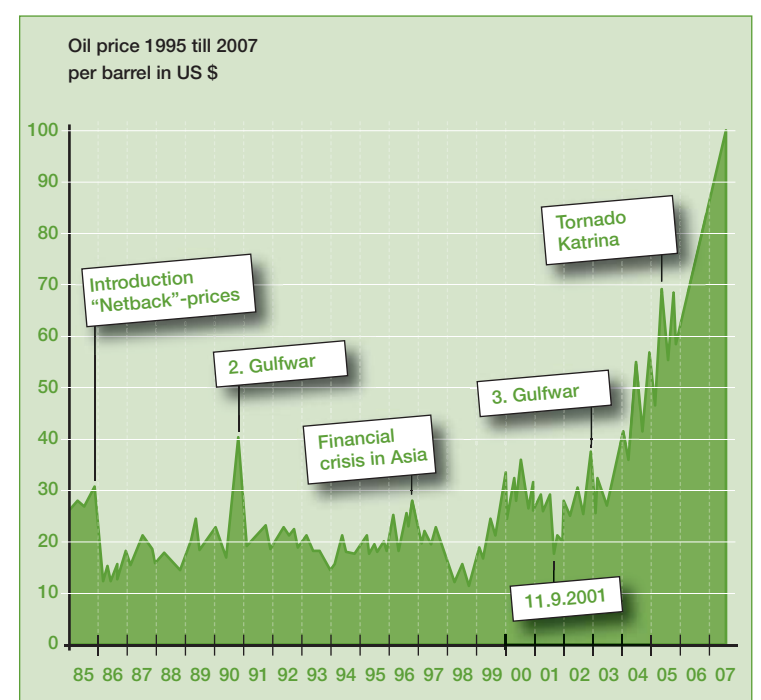
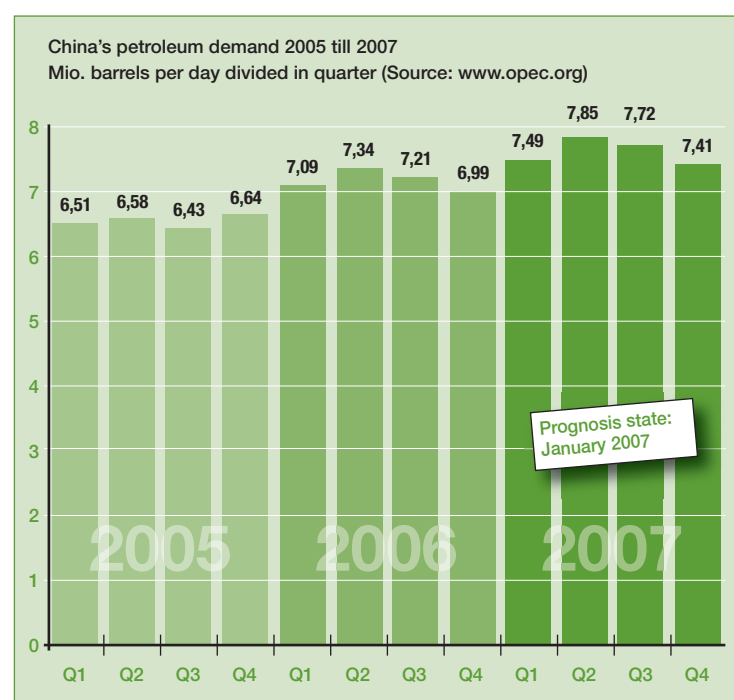
The many building sites and countries worldwide described in this issue prove that environmental awareness is expanding. Everybody gains through high-quality products which are truly environmentally friendly. Also, in that area, Steinzeug | Keramo takes its responsibility very seriously.

Best regards,

Elk Eckert  
Director

Frank Franco  
Managing Director

Halfway through this year the "Belga" press agency in Brussels upset the market via the heading "Plastics Industry expects price increases". The news continued: "The price increase for plastics is between 50 and 100 % which is due to the reduced availability on the European market".



► The EuPC (European Plastics Association), spreads the fear of further price increases in the plastics sector with this latest press release. The reason for this, according to the EuPC, is due to high oil prices and the temporary lack of commodities on the market for European Plastics Manufacturing. It is true that today the price of many plastics has reached its highest ceiling. On average PP (polypropylene) prices have increased by 50 % and polystyrene prices even by 100 %. Of course, this increase results in an increase in the prices of plastic end products (pipes, insulation material, window profiles...), interchangeable items for the automotive industry and such. In the following months the organization expects even more price increases.

The EuPC also warns against a lack of raw materials. It seems that the plastics manufacturers are more often confronted with provision problems with plastics providers, who in recent years have invested in new production capacity in the Mid-East and Asia. The steady, strong growth of plastics usage in China, India, Central-Europe and Russia may play an important factor here. The plastics industry in Europe does not always receive the required and ordered volume. Also the Verband der Kunststoff- und Gummiproduzenten VoG (The Plastics and Rubber Manufacturers Association) has released

news along these lines: "There are also worries and fears that the increase in the oil price will go beyond the "magical" limit of 100 US Dollars/barrel.

For the plastics sector this would be a hard situation to cope with. The manufacturers of plastic pipes have always emphasized how modern their materials are, scornfully disregarding the so-called traditional materials, for example vitrified clay.

However: of what use is a modern material if the price increases are out of control, the supply is troublesome and the availability is not guaranteed? This is when one focuses on traditional materials, because traditionally glazed vitrified clay material is available, its price is not imposed by the world trade, it is immediately available and has been so for a long, long time. Its positive properties have never been discussed. They are known and become stronger... thanks to modern energy consumption. ■



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## Drainage pipes in vitrified clay

► Drainage pipes are used to collect and drain inflowing water. Inflowing water can cause problems with groundwater contamination (for example at waste disposal sites) or with the stability of a construction (for example, under train rails).

Now Steinzeug | Keramo also offers drainage pipes. So far, this kind of pipe only consisted of other materials, and this had disadvantages. Vitrified clay pipes are not only highly chemical-resistant, but can also support high mechanical loads and be cleaned under high pressure. Also, they are insensitive to the stray currents which often originate in the proximity of train rails.

The amount and size of the drainage holes is

determined in such a manner that the soaking plane is large enough, whereas the danger of hole obstruction (due to the soaking of soil particles) is reduced. In order to reach an optimal drain level, the holes are only located on the top of the pipe or pipe body.

For the German market, the German Bundesbahn (German Railroad company) imposes its own strict conditions and regulations. After thorough study Steinzeug | Keramo has been authorized to deliver this new product for building projects of the Deutsche Bundesbahn. This authorization is a guarantee of excellent product quality in Germany. Especially convincing was the high resistance of vitrified clay to varying loads (incoming and

departing trains) as well as its insensitivity to stray currents.

Drainage pipes come in DN 150, 200, 250 and 300 for normal and high load, and have a maximum length of 2,00 m. There are 4 or 6 rows with holes (top side pipe, or divided over the top side and the pipe body). Drainage pipes are delivered with a joint according to the F or C connection system, which is the same used for common pipes.

Mostly the circumstances in which drainage pipes are used are very specific. Our techni-



cal service can always be consulted for advice. They make the necessary calculations and discuss ultimately tailored production. ■

## THE NEW COUNTRIES

## Efforts in the new countries

► We have already announced in previous issues that Steinzeug | Keramo is continuously making an effort to convince the Eastern European countries of the need for reliable waste water transport and the excellent properties and quality of vitrified clay.

A relatively new market for us is Slovakia, which became a member of the European Union on 1st May, 2004. A month earlier, on 28th March, 2004, Slovakia entered NATO and since 21st December 2007 this country belongs to the Schengen zone, making free traffic possible with all neighbouring countries, excepting the Ukraine.

There is, therefore, no doubt that this state is in full development, including in the domain of waste water treatment.

Steinzeug | Keramo determined that there is still an enormous lack of knowledge in the field of sewage systems and related sectors, and has therefore taken remarkable initiative. A series of presentations was arranged through the sales organization of the Czech Republic, a neighbouring country and a former political unit of Slovakia, to which

competent bodies, majors, engineering offices, investors and other decision-makers were invited. The important goal was to provide professional information, as well as establishing and strengthening commercial relationships.

Not only the initiative itself was remarkable, but also the way the presentations were interpreted. Instead of the usual technical presentations and speeches given by our own specialist we chose international evidence from neutral people within the sector who can offer more experience, as well as both practical and theoretical know-how. We had guest speakers from Germany, Hungary, the Czech Republic and Poland.

There was deeper insight into the European regulations related to waste water processing, which is now also applicable to Slovakia, and general financial and technical aspects were also discussed. Naturally, the topics of sustainability and environmental friendliness were touched.

Both the speakers themselves and the great number of assistants shared a positive view of this transfer of knowledge.

And thus it was also for Steinzeug | Keramo, because whoever is convinced of the profitable use of reliable sewage systems is also convinced of the profitable use of vitrified clay.

The presentations were held over several months and took place in Tále Bratislava and Trenčín. ■



Think about it! ✓

## Steinzeug | Keramo

Welcome into the world

02.03.08 – 05.03.08	Trenchless Australasia	Sydney (AU)	27.05.08 – 30.05.08	Water Sofia	Sofia (BG)
11.03.08 – 14.03.08	Smagua	Zaragoza (ES)	03.06.08 – 06.06.08	No Dig Moscou	Moscow (RU)
18.03.08	Vlariodag	Edegem (BE)	03.06.08 – 06.06.08	Ecowatech	Moscow (RU)
20.03.08 – 24.03.08	Salon International de l'Eau et l'Assainissement	Dakar (SN)	18.06.08 – 20.06.08	Exopapa	Bucharest (RO)
09.04.08 – 11.04.08	No Dig Polen	Kielce (PL)	04.09.08 – 05.09.08	Kanalisationforum	Bern (CH)
17.04.08	VVSG	Ghent (BE)	17.09.08 - 18.09.2008	DWA-Bundestagung	Mannheim (D)
22.04.08 – 26.04.08	Tegra	Zagreb (HR)	23.09.08 – 25.09.08	Aqua Trenčín	Trenčín (SK)
05.05.08 – 09.05.08	IFAT	München (DE)	07.10.08 – 10.10.08	Aqua Ukraine	Kiev (UA)
13.05.08 – 16.05.08	Vodka	Brno (CZ)	26.11.08 – 28.11.08	Ecomedi	Arad (RO)
21.05.08 – 23.05.08	H2O – Accadueo	Ferrara (IT)	02.12.08	Duurzaam Bouwen	Zolder (BE)
27.05.08 – 29.05.08	Wod-kan	Bydgoszcz (PL)	02.12.08 – 05.12.08	Pollutec	Lyon (FR)

AUSTRALIA



## Steinzeug | Keramo obtains an important contract in Australia

► In the past years Mernda-Doreen, one of the northern outskirts of Melbourne (Australia), experienced a remarkable growth rate. This is the most rapid growing urban area of the entire state of Victoria.

As more often happens in such fast growing regions the infrastructure could not always follow the same pace, which is why sewage systems reach their maximum capacity in times of maximum rainfall. In order to protect the local environment against overflow of waste water, the sewage system manager, Yarra Valley Water, has designed a new sewage reticulation system which is able to buffer the waste water until the system has sufficient capacity available for adequate drainage.

The building of this new system started in 2006 and was completed during the course of 2008. This important investment is also aimed at providing a solution to situations occurring as a result of the further development of the region.

The order was obtained by Tenix Alliance. Three installations had to be built to manage the water level in Doreen, Mernda North and Mernda South. One of the parts of the entire system was the Parkway Branch Sewer, a DN 900 sewer with a length of 250 meters.

Steinzeug | Keramo sewer pipes were selected for this branch, as they have been manufactured for nearly 200 years and proven to have a life of 100 years. These pipes are distributed by the Humes firm in Australia.

The foremost arguments given to support the option of vitrified clay were:

- the important chemical tolerance, from pH 0 – pH 14
- the mechanical tolerance and the high load capacity of the pipe body and the joints
- the impermeability
- the exceptional wear tolerance

The quality system that Steinzeug | Keramo could demonstrate, and the easy installation of the pipes, were also decisive.

The excavation works for this project were enormous. It was necessary to dig trenches of 8 meters deep and 5 meters wide. This is the first time that vitrified clay pipes DN 900 were used in Australia. ■

### Quality is the decisive factor



### Info

**Client:**  
Yarra Valley Water

**Engineering office:**  
SM Urban Consulting Group

**Contractor:**  
Tenix Alliance

**Distributor:**  
Humes

SPAIN



## Also Sevilla chooses vitrified clay for microtunnelling techniques

► We have already mentioned in one of our previous editions that Sevilla, the most famous cultural and tourist town in Andalusia, Spain, has been choosing vitrified clay for years. Because of the exceptionally high requirements established for sewage materials in this dry-plain region, a responsible selection was made from high quality and sustainable materials.

Although the application of vitrified clay is really not exceptional we still have important news to announce: Vitrified clay pipes were used in a microtunnelling project in the centre of the city, where one unique DN 1200 m string of a total length of 145 m was jacked in one piece to a depth of 5.6 m. A rise of 0.1 % was maintained in a bottom consisting of a mixture of clay and

silica brick. This remarkable work was done in only 10 working days, including the excavation and installation of the start and termination wells. Upon completion everyone involved in these works was highly satisfied, so other microtunnelling projects will certainly follow.

The reason for the preference to using vitrified clay is typical and characteristic of this region, which is very flat, and only the placement of sewage systems with a very weak slope is possible. Due to the slight slope the water flows slower and stays longer in the conduct. Rainfall is very rare there and the waste water is very concentrated, and very aggressive. The water stays longer than normal in the pipes and there is a great risk of corroding gas formation. Only vitrified clay is resistant to these extreme conditions, guaranteeing the adequate functioning of the sewer reticulation for a long period. ■

### Info

**Client:**  
Emasesa

**Engineers in charge:**  
Mario Cabello - Emasesa  
Arturo Gonzales - Marint Casillas

**Contractor:**  
Marint Casillas

**Salesman:**  
Chris McCormack -  
Steinzeug | Keramo



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## A building sprint for the Pope's visit

*2,860 m of vitrified clay pipes for Burgweinting*

► The town of Regensburg intends to create sufficient housing accommodation for all layers of the population on an ongoing basis. In order to do so, the town has initiated the "Burgweinting development programme", one of the greatest programmes in Germany.



Vitrified clay pipes of different measurements are delivered to the Scharnagl building container.

is joined to it by way of a large park with a Roman "villa rustica" in the middle. The first land parcels for development had to be available for the construction as soon as possible.

The Scharnagl firm, a building company from Weiden, acquired the project and immediately started working at a good pace as first, the parcels had to be delivered for construction, and second, the building had to be ready before the visit of pope Benedictus, which meant enormous pressure for the construction to be ready on time. The Islinger Feld, where Pope Benedictus celebrated a mass in the open air, is situated on the limit of the Burgweinting Nordwest II building site. The

The complete development programme consists of a surface of 400 ha, of which approximately 190 ha is for commercial industrial use and approximately 210 ha for homes. In the meantime, a very important part of this development programme has been completed. The fourth and last building site, Burgweinting Nordwest II, links directly to the first project and

firm Scharnagl is a reliable building company with great experience in the construction of sewage systems. The works for this sewage system were complete before the Pope came to visit. The costs for the construction of the sewage system amounted to approximately 1 million Euros, which was financed through the connection and sewage system taxes on two-family houses and row houses. ■



This picture was shown to the entire world as Pope Benedictus, together with thousands of worshippers, celebrated Holy Mess on the Islinger Feld.

### Info

**Client:**  
Stad Regensburg

**Building company:**  
Scharnagl Hoch- und Tiefbau GmbH

**Contractor building materials:**  
BayWa, Lappersdorf

**Salesman:**  
Bernhard Artmeier - Steinzeug | Keramo



## Collector Nord de Thau Agglomération- 1<sup>st</sup> phase

► On the initiative of Communauté d'Agglomération du Bassin de Thau a thorough and complete study was made of the existing sewage reticulation system. The study showed that it was necessary to improve and expand the pipe network in order to favour water transport from the municipalities from the north of the Bassin de Thau to the Eaux Blanches waste water treatment plant in Sète.

When the first dimensioning studies were performed, a long time before the main plans for the construction of the waste water treatment plant of Eaux Blanches in Sète were

finalized, it was already foreseen that entire sections of, or a great part of, the sewage reticulation systems of Gigean, Poussa, Bouzigues and Montbazin had to be connected before 2025, and the transport pipe reticulation system in the North was therefore started. The completion of the works had two phases.

During the first phase the sewage systems of the municipalities of Balaruc les Bains and Balaruc le Vieux were initiated. Pipes of 2.5 km in DN 600 were built in an open trench to a depth of between 1.50 and 4.00 m. These works will be finished between June and November 2008 and are written off over an investment period of 60 years.

The construction ground varies between massive blocks of grey

limestone to red clay, with interruptions in many places. The vitrified clay project was specifically chosen because of the nature of the waste water to be treated. It contains high quantities of hydro-sulphide (H<sub>2</sub>S) and the conducts should be waterproof due to the proximity of the Thau lagoon, where Mediterranean oysters and mussels are cultivated. ■



### Info

**Client:**  
Agglomération de Thau

**Investigation office:**  
Bureau d'études de l'Agglomération de Thau

**Contractor:**  
Bec-Frères

**Salesman:**  
Gianni Gava - Steinzeug | Keramo

CZECH REPUBLIC



► We have already mentioned in one of our previous issues that vitrified clay was also chosen in the industrial town of Karvina, in the northeast of the Republic of the Czech Republic. This great building project, for which a great part of the existing sewage system had to be renewed and expanded, had already started at the beginning of this year.

It was necessary to construct a total of 17,167 meters of vitrified clay pipe, and 4 km of this length was installed by subterranean micro-tunnelling. The cost of the whole project amounted to 45.6 million Euros, of which 40 % was subsidized by the European Community.



## A world record in Karvina

In May the microtunnelling of a DN 1400 pipe of 24 meters in length was started with vitrified clay. These works were performed by the Subterra firm in the Czech Republic with microtunnelling machines of the Japanese Iseki brand (TCC 1280 type). The most important part of these works was done under an old town park with big, old trees and under broad streets with 4 driving lanes. Both the park and the streets were accessible during the works.

Problems were expected for a line length of 165 m with regards to the subsoil, which is why an intermediate control hole was made by Subterra at first. If this was necessary, a new start could be made with the next part of the microtunnelling conduct. During the jacking process everything proved to be easier than was thought and the jacking forces were especially lower than expected.

When reaching the intermediate control hole, the decision was made to continue the jacking without starting a new section so that all spectators could see how the pipes slid slowly but surely through the well (at a pace of between 8 to 18 meters daily). This is very exceptional.

The entire 165 meter conduct was jacked through in one movement and without any remarkable problems - An absolute record! Besides this, the horizontal deviation between the starting and termination point proved to be only 2 centimetres wide, and the vertical deviation was even reduced to only 1 centimetre - A masterpiece, both for the contractor and for the material, which proved good engineering practice and quality with a final sustainable result. ■

### Info

**Client:**  
Town of Karvina

**Engineering office:**  
Hydroprojekt a.s. OZ Ostrava

**Contractor:**  
Subterra Ostrava

**Salesman:**  
Frantisek Bartos - Steinzeug | Keramo



BELGIUM



## Housing project “Lange Velden”, Wondelgem

► A new development project is being undertaken in the proximity of Industrieweg and the tram line by the Extensa N.V. company, together with Wonima N.V. and the Sociale Huisvestingsmaatschappij (Housing Company De Volkswaard), in Wondelgem, a sub-municipality of the town of Ghent.



This urban area has a size of more than 30 ha. and also contains a green buffer of 12 ha. along the R4 federal road. 10 different housing types will be constructed, and 98 social houses and apartments will also be built.

In the north of the area there is a park, the green buffer, which is extended to a width of 135 meters over the whole area. In this park a water basin is built which also plays a role in the water economy, and as a kind of pool decorating the landscape. This area will have a high biological and recreative function.

On March 3rd 2008 important infrastructural works will be initiated. In addition to lanes and crossroads for the opening of this area, special attention is also given to extra safe cycle tracks, green zones, child friendly and recreative areas.

For the important sewage systems works which are necessary for a new project of this scope, 5,785 m of vitrified clay pipes with a diameter of between 150 and 400 from Stenzeug | Keramo will be used. The contractor has studied the needs and technological requirements here, and after comparing costs has come to the conclusion that vitri-

### Info

**Contractors:**  
Vennootschap Extensa N.V.  
Wonima N.V.

**Engineering office:**  
Lesaffre N.V.

**Contractor:**  
Gebr. Van den Berghe

**Social Huisvestingsmaatschappij (Social Housing Company):**  
De Volkswaard

**Salesman:**  
Joeri Hamal -  
Steinzeug | Keramo

fied clay offers the most economic and cost-effective solution, due to the sustainability of the material.

A fully separate network is installed for the drainage of undiluted waste water.

This area is also very flat, causing long residual storage periods of polluted water and a great biogenic sulphuric acid deterioration. For this network a total of 74 inspection chambers are also built in vitrified clay. Although very often another, cheaper material is chosen for this, the contractor preferred an absolutely uniform network without any weak points. All chambers were tailored by Steinzeug | Keramo and all parts, from the main chamber to the rising pipes and connectors, are made of one unique material: vitrified clay. ■

## The sales team in the Czech Republic

*With emphasis on the European support*

Since 2000 Steinzeug | Keramo has been present on the sewage system market of the Czech Republic. The Czech sales team consists of nine employees, and engineer Jan Kozlík is the head of the team. Together they ensure that the market is booming, and they do it very well. We shall give a short description of the current situation and the properties of the sewage system branch in this country, which became a member of the European Union in 2004. We shall also provide some information on the team that is in charge of sales there.

### ► The financing is guaranteed

In the Czech Republic water management is under great pressure. According to EU guidelines, municipalities with more than 2000 inhabitants should have sewage systems and drinking water conducts at the latest by 2010. A list drawn up by the Ministry of Environment mentions at least 21 important projects for a building value of more than 24 million Euros. The most remarkable are the rebuilding of the waste water treatment installation in Prague on the Kampa island in the Moldau (301 million Euros), the completion of the modernization of the Brno waste water management system and the "Syratka pure river basin" in South-Moravia.

There is also the Operational Environment Programme (OP) which shall cover a volume of 4.9 billion Euros in 2013. The priority here is nearly 2 billion Euros for the improvement of the infrastructure, which means the rebuilding and optimalization of the waste water treatment installations, sewage systems, drinking water supplies and protection against floods. Apart from the European subsidies there are also Czech subsidies: The Ministry for Environment Protection subsidizes between 5 % and 7 % of the big EU projects, and the Ministry of Agriculture provides finances for the smaller regional projects.

Currently, the municipal waste water treatment companies invest in hundreds of kilometres of sewage systems. Many people also count on one of the European "supporting monies", for example the Vodovody a kanalizace Hradec Kralove company which is part of the Veolia group, who have proposed an investment plan which is in force until 2016. This plan will include the construction of hundreds of smaller waste water projects with a total value of 82 million Euros. The connection rate for the sewage system

is estimated at between 65 % and 90 %. As always, the highest connection rate will be in the cities. The capital of Prague indicates a figure of 99.2 % and the average connection percentage was 82.1 % in 2007.

### New building and renovation

The average age of the sewage water systems is between 50 and 80 years. The oldest conducts are more than 100 years old and, of course, these are made of vitrified clay pipes. Because of this age structure, and due to the constant expansion of the cities, the EU guideline must be met. The guideline established that cities and municipalities of more than 2000 inhabitants should be provided with sewage water systems (and drinking water supplies) by 2010 at the latest. For this purpose sewage system conduits must be built and renovated. The rehabilitation of sewage system pipes seems quite impossible due to the bad conditions of these pipes.

### Planning, building and exploitation

Before the construction and/or reconstruction of the sewage water pipes and systems, the main contractors are the cities and municipalities which receive financial support from the state in the framework of EU projects. These cities and municipalities are not only contractors, but also automatically become the users of sewage system networks. This task of waste-water treatment was originally assigned to the communities, who were also responsible for the proper functioning of the managed systems. Currently, international companies such as Veolia, Aqualia, Enerie AG and Ondeo are user-owners.

The road from planning to realization of a sewage system construction project runs

relatively smoothly and quickly shortly before the final phase. First, a study is performed for the project to be realized, then from the many financing possibilities, one financing method is decided upon. According to this choice, a request for an application should be written up and filed. After a positive answer (approximately 60 % of the project designs are subsidized by the EU), a contractor of works is selected, and the "combat" begins. This means that the negotiations on piping material will be applied.

### Traditional and modern

Until the fall of the Iron Curtain, vitrified clay and cement pipes were traditionally used products. After 1989 their market share decreased: plastic pipes became the preferred construction material because they were new and cheap. In the meantime, the market share of vitrified clay could be recuperated because of the convincing arguments on behalf of the excellent properties and high quality and sustainability of vitrified clay pipes.

### An adequate update

Each year for three days the VODKA fair provides a meeting point for the waste-water-technique industry. This year, for the first time, the fair was completed with a Czech NO-DIG trade fair. Also, in Slovakia the "Aqua Trencin" fair, specializing in waste-water technique, is the preferred spokesman. Furthermore, there are many small, and very small, local fairs and events in which the Czech team assists as an exhibitor and/or visitor in order to learn about the latest market developments or receive other information. For the international market, it is also important and of interest that fairs like the IFAT, WASSER BERLIN and NO-DIG are, of course, also visited by our Czech colleagues. ■

## Info

### The Czech Republic in figures

Area: 78,864 km<sup>2</sup>

State structure since 2000 a subdivision has been made of the three historical land regions Bohemia, Moravia, and Czech Silesia.

Capital: Prague

(1.5 million inhabitants)

Population: 10.3 million

(31 March 2007)

State form: Parliamentary republic

Admission to the EU: 1 May 2004

### The team

#### Constitution

#### Sales Organization CEE & SEE:

Leader: Eng. Christian Weidinger

Head of team: Eng. Jan Kozlík

#### Sales:

Northern region: Martin Pernica

Eastern region: František Bartoš

Southern region: Eng. Theodor Fiala

Western region: Petr Mertl

West Slovakia Republic region:

Eng. Jano Pavlik

East Slovakia Republic region:

Vlado Kraveč

#### Internal sales:

Assistants: Hana Barošová,

Dana Černá

Bookkeeper: Blanka Pečmanová

#### Partner traders:

6 VIP Traders

#### Market performance

Contact visits at:

- Contractors  
(cities and municipalities,  
drain water communities)
- Engineering offices

The aim of these examples is to convince these three partners of which would be the best choice for the piping material from the outset. Service and support are also offered. The contractors can, nevertheless, refuse the proposed material and choose another material, and may even have an influence on prices.

#### Influence of admission to the EU

Admission to the EU allows the Czech Republic to provide professional information from all over Europe. It is also very comforting to know that the Czech Republic purchases vitrified clay pipes of the highest quality.



The Blue Pipe has reached the sales team in the Czech Republic. First row from the left: František Bartoš, Blanka Pečmanová, Dana Černá, Hana Barošová, Jan Kozlík; second row from the left: Theodor Fiala, Petr Mertl, Jano Pavlik, Martin Pernica, Vlado Kraveč. We are happy to be able to spend our efforts and energy on a material that is as solid and sustainable as vitrified clay. This way, we contribute to the environment.

LOGISTICS OPTIMALISED



## The best product deserves the best logistics

*Vitrified clay pipes and accessories are used worldwide. Every year thousands of tons of cargo leave our factories to reach our clients all over Europe and the Middle-East, Far East and Oceania.*

► The greatest part of the transport in Europe goes over land and is loaded in our three establishments in Hasselt, Frechen and Bad Schmiedeberg. Throughout the years each establishment built up its own expertise and acquired its own personal experience. Because of this, the method of loading was not exactly the same in all establishments. This was not a problem in itself, but standardization was necessary from the material usage, cost saving and security points of view, among others.

Another stimulating factor was the stricter transport legislation subsequently applied in Germany. In Belgium, as well as in other countries, this legislation has yet to be applied. A truck has already been stopped and could not continue on its way because, according to the police agents, it was not complying with loading and safety regulations. We wanted to avoid and prevent any arguments or damages arising as there were no specific

regulations for vitrified clay products. The question also came from our loading foremen. The cargo foreman is the responsible person when a cargo does not comply with regulations, and should also pay the fine and be listed on the penalty record. Our cargo foremen therefore also had a personal interest in intensive collaboration with regard to the creation of clear regulations, and that is what they did.

They shared their broad experience and years of knowledge with external specialists in the trade: The TUL-LOG firm from Dresden (Germany) specializes in this field and we have also consulted the police force, where we found a Mr. Mertens who has been in charge of traffic control for years and knows what the specific focus points are.

Many extensive detailed and technique-based guidelines have been drawn up. An examination was performed on each product with its own dimensions, weight, packaging and eventual weaknesses recorded. Rules for strict compliance were drawn up on paper in all establishments and by all transporters. These guidelines offer a neutral solution in the case of discussion with the police force or with other controlling agencies. We consulted with Mr Mertens with regard to strong practice-oriented education of our cargo per-

sonnel in order to achieve the required uniformity.

One of the actual improvement points is the utilization of a skid-proof carpet. This way the cargo cannot move

and the number of tension belts is also reduced, and thus with higher safety the cargo time is reduced. Logistics is efficiency. Of course, the transporters were updated through written regulations for mandatory compliance. Reference is made on the delivery documents to the applied cargo and safety regulations. The necessary contact data are also provided so that the police force or safety services know whom to correspond with.

Another direct improvement of our cargo which is the result of the newly elaborated procedures is the use of a wooden lathwork which is continuously slid in between the loaded pallets. If the cargo still moves or imbalances the products no longer touch each other but collide with the (relatively soft)



wood. In this way, nearly always inevitable transport damage is reduced to a minimum. The laths are charged to the client, but the cost is reimbursed upon their return.

Since the termination of the study AA pieces (for the connection of inspection chambers with short pipe pieces) are packaged into thread steel boxes and are now vertical, which also reduces damages.

There are nothing but advantages to these improvements - this is the way good logistics is tailored for the transport of the product, which in turn contributes to better service. ■

PLASTIC ON THE HAWAIIAN BEACH

## The plastic waste carpet

*Everything but the truth*

► Since the beginning of this year there are again alarming headlines in newspapers, weekly magazines, online magazines and television news about plastic waste in the Pacific Ocean. This is not simply a matter of some floating plastic bottles or soda cans, pieces of fishing nets or remnants of plastic bags. No! This is a giant carpet of plastic waste as big as Central Europe, with a weight of three million tons floating in a whirlpool between California and Hawaii - and the entire situation is just as alarming as the newspaper headlines.

Although this news is not new it is featured in the current issue of the German DER SPIEGEL, as well as in various Belgian newspapers and television journals. Every year more than one million dolphins are killed as a consequence of plastic waste. Turtles and more than 100,000 fishes also turn up dead due to this filth. They suffocate in the six-pack rings, get caught in fishing nets, or cannot ingest food and die because their stomachs are filled with plastic. In its March 2004 issue, GEO Magazine showed the headline: "A giant carpet of plastic waste. A carpet recently viewed by marine biologists." STERN, SPIEGEL Online, HANDELSBLATT and many others had similar news and headlines, and the environmental organization GREENPEACE uses every opportunity to focus media attention on this problem worldwide.

Waste in the ocean is not a new phenomenon but it has acquired new proportions: First of all, the waste mountain floating in the sea is gigantic. Secondly, the waste is nearly all plastic and extremely dangerous for the flora and fauna. Moreover, plastic has the property to store chemical toxins as a "toxic mushroom," and finally, plastic is not biodegradable waste, and thus "the dirt cannot be drained"! With this in mind one can see that plastic waste is no longer just an everyday problem but an urgent and growing threat to the oceans - worldwide. Also, we have not yet discussed the food chain cycle in which humans are also ultimately involved.

The gigantic mass of plastic waste between the islands of Hawaii and the American continent has acquired the surface area of Central-Europe, and is a very special phenomenon. Here, high pressure air provides a strong and enormous ocean current, turning slowly clockwise and fed by the rising heat and descending colder air masses (air streams in the tropics). Due to the consequent suctioning the waste washed ashore is trapped and the waste mountain grows. Other oceans also suffer from "plastic waste". There is also a lot of plastic waste floating around in many other whirlpools in the Pacific Ocean, the Atlantic Ocean and the Indian Ocean, although the quantities are smaller. Even here at our front door, according to a study of marine scientists, 20,000 tons of plastic waste arrive in the North Sea from the North Sea countries. 300,000 pieces of plastic per square kilometre are floating on the sea surface and 100,000 are deposited on the sea bottom. Approximately 97 % of the Northern seagulls in the North Sea have approx. 0.31 g of plastic waste in their stomachs - often a fatal dose.



Plastic on the Hawaiian beach. (© Alex Hofford/Greenpeace)

Of course, according to scientists, the visible pollution of the sea is not the greatest problem. The waste becomes more destructive as it slowly becomes "invisible". According to the British biologist Richard Thompson "Plastics are gradually ground down by UV-rays and wave movements into smaller pieces, until a kind of powder is left." Worldwide 225 million

tons of plastics are produced yearly - all made of expensive oil. Apparently oil still remains too cheap for humans to be using it sparingly: Only a small percentage is recycled worldwide! Instead, unimaginable quantities reach the oceans and also the beaches. On nearly every beach worldwide, the sand contains an average of between five and ten percent plastic.

It is really time to make good on the slogan from the end of the 60's: "Jute instead of plastics". Vitrified clay is figuratively the alternative for plastics for the drainage of waste water. ■

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## Trenchless Australasia

► Every year, Steinzeug | Keramo provides important quantities of microtunnelling pipes to Australia and other surrounding countries. When a specialized fair is held in the microtunnelling business it's the ideal opportunity for us to strengthen our position even more.

The Trenchless Australasia fair is one such an occasion. This was the seventh time that the ASTT (Australasian Society of Trenchless Technology) chose a city in Australia to hold its yearly meeting, this time in Sydney. The next conference is expected in 2009 and will take place in Melbourne. Our regional sales manager, Peter Simpson, participated with

our Australian partner, Humes, a manufacturer of steel-reinforced cement pipes and cement constructions who offers our products for applications that demand high requirements.

In an accompanying conference programme, among other sources, it became evident that the microtunnelling technique in Australia has undergone important development. Many Australian companies now also employ highly specialized techniques in the Middle East and Asia.

The visitors showed special interest in the "green" aspects of vitrified clay, which is not

only appropriate for difficult applications but is also a uniquely environment-friendly material. ■



## No-Dig Kielce

► Everyone is aware of the many advantages offered by the microtunnelling method in Poland as well: There are fewer transport problems, fewer noise problems, less landscape disturbance, better access to houses, shops and public buildings during works, etc.

It was demonstrated here once again that vitrified clay is an excellent material for these

kinds of applications: Steinzeug | Keramo won the price for the best trenchless application in Poland and received the "Expert 2008" award. The assessors showed considerable appreciation for the trenchless installation of vitrified clay pipes under the take-off and landing strips of the airport of Gdansk, which operated as normal during construction works. Something we really can be proud of!

This third international conference received a lot of visitors. Our stand proved to be a steady meeting point for investors and contractors, not only from Poland but also from neighbouring countries. ■



## Smagua Zaragoza

► The Zaragoza Fair is very well-known in Spain. This is a huge trade centre on the border of the city, where events are organized in a row, attracting visitors from all over Spain. This year there are guest-stars like Bob Dylan and Gloria Estefan.

This was the 18th time that the "Smagua" fair has served as a meeting point for specialists from around the world who have something to offer on water issues. Of course, Steinzeug | Keramo was present as a manufacturer of a sustainable and environment-friendly product

contributing to reliable waste-water processing.

On our stand our sales manager for Spain, Chris McCormack, preferred a rather traditional arrangement: An exhibition of our products and services supported by pipe sections, accessories and many other explanatory materials. Although we have been active on the Spanish market for years there are still some regions where vitrified clay is not the first option as far as sewage systems are concerned. Chris was then also happy to have the oppor-

tunity to explain the advantages of vitrified clay to many visitors from such areas. ■



## No-Dig Moskou

► Russia, too, is one of the target markets Steinzeug | Keramo focuses on. At the beginning of the 90's, after the fall of the Iron Curtain, the country underwent a steady development in the field of infrastructure, and also of sewage systems, and this has huge potential. Firstly, of course, we should see to it that our company, our products and the vitrified clay material is sufficiently well known and appreciated.

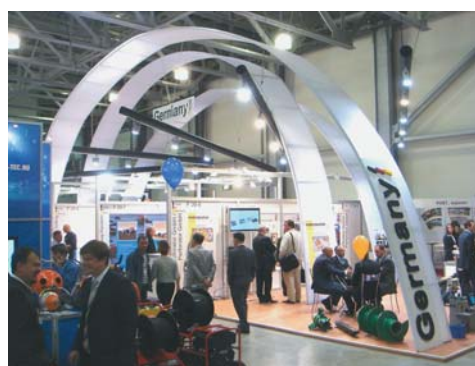
A good opportunity for this was the NO-DIG Moscow, which was simultaneously organized with the trade fair ECWATECH for water and waste-water. The combination of these two trade fairs addressing various target groups

was a great success. The amount of visitors was surprisingly high, and first contacts were made between representatives of important communities from all over Russia.

We decided on a common stand with the German Society for Trenchless Technology (GSTT), who had participated in this fair before. A common stand is not only beneficial money-wise and from a logistic point of view, but it also facilitated synergy with other related companies which are already known on the market.

During the fair Steinzeug | Keramo also organised a congress in which speakers from the

sector gave an exhibition on the properties of vitrified clay and the many applications of the product. ■



## Produced by:

Keramo Steinzeug N.V.  
Paalsteenstraat 36 · B-3500 Hasselt, Belgium  
Phone +32 11 21 02 32  
Fax +32 11 21 09 44  
E-mail: info@keramo-steinzeug.be  
Website: www.steinzeug-keramo.com

STEINZEUG Abwassersysteme GmbH  
Alfred-Nobel-Straße 17 · D-50226 Frechen, Germany  
Phone +49 22 34 50 70  
Fax +49 22 34 50 72 07  
E-mail: info@steinzeug.com  
Website: www.steinzeug-keramo.com

