



Editorial

Lots of ENSINGER innovations at K 2004

Dear Readers,

We have already informed you at this juncture about our newly created organisation and measures to develop new applications and materials in the semi-finished goods area. Our global development and production teams have done a good job, so that we are looking forward to presenting a spate of interesting new products at K 2004.

We are particularly proud to introduce a polymer which is still completely unknown here in this country, our TECAMAX SRP. As the name implies, this material has properties which go to the limits of that which,

until now, was considered possible. TECAMAX SRP is the hardest and most rigid non-reinforced polymer, which is currently on the market. It opens up a completely new range of possibilities for structurally high-demanding parts in areas where the use of reinforcing fibres is undesirable. We already now believe that this material is not only interesting from an academic point of view – it is some time since a new polymer was presented to the general public – but that it will find a multitude of application possibilities.

Our product range of materials for the medical technology field will be upgraded with TECAPRO SAN and TECAFORM SAN. They are based on a new antibacterial material, whose release principle has proven to be

very effective and exerts an effective and long-lasting suppression of microbial growth.

We are adding a new product range of calendared films and laminates based on TECATRON PPS, as well as semi-finished products made of the particularly abrasion-resistant polyester TECAPET.

And last but not least, our special polyamides will be extended to include calendared sheets made of TECAMID 6 VF for deep-drawn moulding applications and non-halogenated, flame-resistant TECAMID 6 FR T. On our own behalf, we are reporting in this edition on another highlight. The ENSINGER Cup 2004, our great football competition took place for the third time. Never before in our history were we able to welcome so

many guests from all over the world. The competition took place on a wonderful later summer day and offered both a high level of playing skills and a lot of good spirits. In a high-class final match, the team from our business associates at the company LuK beat the ENSINGER team from Cham by 1:0. But see for yourself, perhaps you can get a feeling for the wonderful atmosphere on that day in the article about the ENSINGER Cup and in the accompanying photos – or better still: Be there yourself the next time!

But before we meet you on the football pitch, we look forward to your visit to our new booth at K 2004.



K. Ensinger
Klaus Ensinger

R. Reber
Dr. Roland Reber

ENSINGER makes its mark with more new products than ever

[DW] True to our trade fair motto for K 2004, "ENSINGER Global Innovation", the company is presenting a whole series of new developments, product range and applications at the K, the inter-



national specialist trade fair for plastics and rubbers taking place from the 20th to 27th October in Düsseldorf. We would like to introduce these developments to you on this and the following pages.

Many different colours in medical technology: TECAFORM AH MT and TECASON P MT



Test piece for knee-joint surgery, colour-coded for different sizes of fit

Coloured plastics are very popular in the medical technology field, e.g. in order to easily differentiate between instruments and sizes. It is important that the colours remain constant as far as possible and that the guidelines for use in medical technology applications are fulfilled.

Plastics are able to demonstrate their excellent corrosion resistance compared to metals in many cases. For example, coloured anodised aluminium materials are attacked

by alkaline cleaners and quickly lose their colour. The ENSINGER materials TECAFORM AH MT and TECASON P MT offer a broad range of colours in commonly used sizes.

These plastics excel with good resistance against detergents and disinfectants and numerous solvents. They may be easily sterilised using conventional sterilisation methods. Further characteristics are the good strength, rigidity and ductility of the materials as well as low water absorption. TECAFORM AH MT and TECASON P MT are both very good electrical insulators. They also fulfil the relevant requirements for use in the medical technology area: They are FDA compliant and achieve positive results in partial biocompatibility tests according to USP cl. VI (on raw materials) and ISO 10993 (on semi-finished items).

Dimensionally stable and lightweight: TECAPRO MT

Sterilisation containers, e.g. for surgical equipment, require good dimensional stability even after many sterilisation cycles. TECAPRO MT can withstand higher temperatures than standard polypropylene thanks to a special form of stabilisation. Compared to PTFE, which has been used up until now, TECAPRO MT has

a considerably lower density, which distinctly reduces component weight. The standard colour is white, but the material can also be produced in other colours if the customer wishes.

TECAPRO MT has outstanding resistance to detergents and disinfectants and can withstand fre-

Superlative TECAMAX SRP

The strongest, hardest and most rigid unreinforced thermoplastic

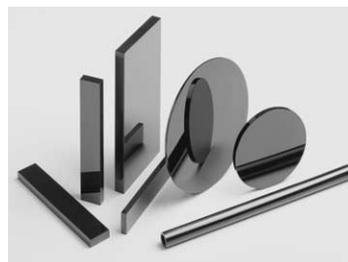


The most exceptional innovation which ENSINGER has to present at K 2004 is the self-reinforcing thermoplastic TECAMAX SRP. In collaboration with Mississippi Polymer Technologies, Inc., ENSINGER exclusively produces and sells moulded and extruded semi-finished shapes made of TECAMAX SRP, a polyparaphenyl copolymer material, which is based on Parmax® SRP from MPT.

The new material family possesses extraordinary properties: Excellent mechanical properties, even at cryogenic temperatures, and low moisture uptake distinguish TECAMAX SRP. Furthermore, it is very highly resistant to chemicals and solvents, exhibits dimensional stability and scratch and abrasion resistance. The polymer is heat stable to 400 °C



The material offers exceptionally good machining ability to the tightest tolerances.



Extruded and moulded semi-finished shapes made of TECAMAX SRP are used in many different fields.

and non-flammable. According to Dr. Jürg Wiedler, Business Development Manager at ENSINGER, TECAMAX SRP is 200 to 800 percent stronger and more rigid than other unreinforced thermoplastics.

The new material is suitable for parts such as bearings, gears, flanges and pipes, where lightness is very important, as well as stability and precision. Dimensional accuracy is particularly apparent in the case of parts with complicated geometries. It can thus be preferentially used in the aeronautics and space industry, in electronics or the automotive field, in mechanical engineering applications and in medical technology. TECAMAX SRP can be easily machined with conventional tools to the tightest tolerances.

TECAPRO MT can be easily machined thanks to a special additive formulation, and laser inscriptions are possible.

It goes without saying that conformity of the products to FDA 21 CFR 177.1520 is a prerequisite for applications in the medical technology and foodstuffs area.

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Material cost-savings with TECATRON PPS



Materials are required in chemical process engineering which offer good protection against corrosion at high temperatures. In particular, pipes and tanks have to be fitted out in this way. TECATRON PPS films and

foil-clad laminates, TECATRON PPS LAM, were developed for this use. These sheets and films are versatile in use and chemically inert, inherently flame resistant and demonstrate good thermal characteristics. For this reason, they are also an excellent choice for replacing fluoropolymers, which means a material cost saving for the processor.

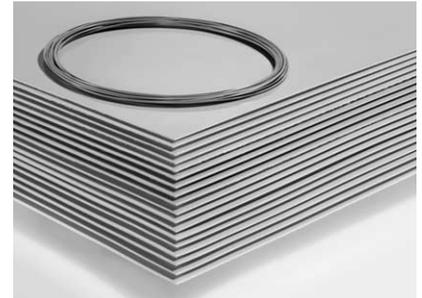
TECATRON PPS has excellent thermal stability, outstanding mechanical properties and a low density. It has high chemical resistance and low permeation. The sheets and films can be worked easily: Glass-fibre reinforcement and impact modification are possible.

The plastics processor has an easily formable crystalline semi-finished product with an exceptionally high

melting point, which allows processing at temperatures between 288 and 315 °C. Furthermore, in many cases the sheets and films, which are mechanically and manually weldable, can be tailor-made to the specific needs of the customer.

TECATRON PPS semi-finished shapes have, in the meantime, successfully completed practical tests, with deep-draw moulders amongst others. The sheets or films (up to 122 cm width) are available in thicknesses

between 0.25 and 6.4 millimetres and as laminates with a thickness of 3 mm. In addition, a welding wire of 3.5 mm dia is available for manual welding.



TECATRON PPS laminate and welding wire.

TECAFORM SAN and TECAPRO SAN

Safety for medicine and foodstuffs



Acetal and polypropylene containing an anti-microbial additive provide additional safety in medical technology and foodstuffs processing.

TECAFORM SAN and TECAPRO SAN achieve their anti-microbial effect through the release of silver ions and offer the following advantages: They have anti-microbial activity against gram-positive and gram-negative organisms.

They act by physically destroying the cells, so that no resistance arises as often happens with organic active substances.

The active substance is homogeneously distributed in the plastic, so that the effect is also ensured regardless of abrasion. The active substance does not diminish in any way and a



Instrument containers made of TECAPRO SAN.

continuous effect can therefore be ensured.

There are no discolouration effects through topical release of the ions.

TECAPET and TECAPET TF

Optimum cutting operations



Up to now the deep-drawing of partially crystalline materials has mostly been a problem. Thanks to the development of special types of raw material, we are able to offer a polyamide 6 in the form of TECAMID 6 VF which is outstandingly suited for deep-drawing applications.

The material is used in mechanical engineering applications and in particular the automotive field; in the latter case especially in the engine compartment.

TECAMID 6 VF ex-

cells with good toughness and high strength due to glass fibre reinforcement. Temperature stability in continuous use is ensured up to 140 °C. The material is very resistant to oils, greases and solvents.



TECAMID 6 FR T

Flame retardancy for different means of transportation



Fire and flame protection is an important subject in transport. The non-halogenated flame retardant polyamide TECAMID 6 FR T was developed especially for this use. This new material can be used in trains, buses, on ships, in fact everywhere in such means of transportation where there is a requirement for the use of a flame-inhibiting



Flame-retardant TECAMID 6 FR T in thin plates.

material which offers stability at the same time.

The material excels through good strength and rigidity and minimal smoke emission in case of fire. It fulfils the requirements for preventive fire protection in rolling stock according to DIN 5510-2.

Excellent results were demonstrated in various classification testing series (flammability class S-4, smoke emission class SR-2, dripability class ST-2).

TECAMID 6 FR T can be used cost-effectively for making panels, inner cladding, window strips or armrests in internal areas, as well as for cable and sling clips, covers and sliding plates in wagon junction modules in external areas.

TECAPET and TECAPET TF

Optimum machinability



The increased requirements for the machining of precision components place high demands on the processing ability of materials. TECAPET is polyethylene terephthalate which has been optimised for precision machined parts, e.g. in the field of semiconductors and in all mechanical engineering applications. TECAPET TF possesses high abrasion resistance through PTFE

modification and is especially suitable for slip-stick applications.

TECAPET is impact resistant with a high degree of hardness and rigidity, has good creep and abrasion strength, extraordinary dimensional stability and good electrical insulation. The material is resistant to chemicals, has a low tendency to pick up contamination and has good radiation stability.

Do you have any questions . . .

. . . about particular products or would you like more detailed information? – Then please contact our company associates Dr. Jürg Wiedler, j.wiedler@de.ensinger-online.com, Tel. +49 70 32-8 19-7 51 (Business Development) or Peter Bongardt, p.bongardt@de.ensinger-online.com, Tel. +49 70 32-8 19-2 45 (Marketing Advisor Technical Services).

We will be pleased to advise you.



It was both sporty and jolly! ENSINGER summer festivity and football tournament

[DW] It was like a public festival at the Affstätter sports ground the weekend of 18th and 19th September: This year's ENSINGER summer festivity took place there in perfect late summer weather. Customers and suppliers as well as associates from all the European subsidiaries and a delegation from the USA had made the journey – almost 1000 visitors and guests had found their way to the grounds for the company festivity. The company LuK from Bühl in Baden and business partners from the company Victrex – in the latter case the top management – even came with their own football teams, in order to participate in the competition. The whole day was dedicated to sport: In the morning our colleagues from Cham sized up their colleagues in Nufringen in a tennis match and in the afternoon the traditional football tournament took place. A total of 20 teams fought it out in two categories “professionals” and “fun teams” for the prized cups and medals. The teams ran after the ball in imaginative and more or less practical costumes. The “Controllers”, for example, were all dressed in individually named shirts (all with the number “0”), the “Granulators” team came in chemical protective clothing and the “Bosses” appeared with a business look and sports shorts.

The ENSINGER subsidiaries were also creative: The British played in elegant dress with the theme “The Avengers”, while the Polish cheerleaders danced on the side of the playing field. The Czechs, French and Italians also gave their very best to get into the final – and the Spanish even had their children with them as support, who fought for the ball “just like the adults”. In the end, the winners of the fun team category were the “Cross-kickers” and the team from LuK won the professional category. The respective second and third placed teams were also able to take shining cups home with them – and all sporting participants received a medal. All other comforts (food!) were taken care of as well as the right musical setting: In the afternoon, Croatian folklore was on the programme, and the town band from Rottenburg played in the evening – guaranteed to lead to high spirits with their hot rhythms and polonaise dancing around the tent. No one was left sitting on their seats and the dance went on late into the night. Wholehearted praise goes to the organisation team for this marvellous and perfectly organised festivity!

By the way: You can also order the highlights of our summer festivity on a CD-Rom from us – we have compiled more than 500 pictures. Simply send an e-mail to impulse@de.ensinger-online.com.

Anniversary congratulations



[MBe] During our summer party, we once again toasted all those colleagues recently celebrating their anniversaries. Most of them were already introduced in the last “impulse”. In the meantime, Eugen Leibham (3rd from the left) and Hartmut Leimbrink (4th from the left) have both celebrated their 10-year company anniversaries, so we wish to extend congratulations to them too: Mr. Eugen Leibham joined the company in 1994 and was first employed in profile finishing. After a short peri-

od, he changed to the tempering department where he still works today as a specialist operating the tempering ovens. On 15th September 2004 we were able to congratulate Mr. Hartmut Leimbrink on his anniversary. Mr. Leimbrink is Manager of the Tool Construction Department, which is part of the Service Centre plant in Nufringen, and is responsible for all aspects of ‘tooling’, ranging from planning to production to repairs.

Prize competition.

Winners of our last competition were Peter Lindh from Jan O. Mattson in Sweden, Sascha Mannos from Bizerba and Roland Teufel from ENSINGER Sintimid, Austria. They each won a useful bike repair kit. Congratulations!

This time, we want to know: **What is the ENSINGER slogan for the K Show?**

- a) Ask. Think. Succeed.
- b) ENSINGER Global Innovation.
- c) Ask local. Think global.

Just send the correct answer by e-mail to impulse@de.ensinger-online.com by 1st December. Perhaps, you may also be the owner of one of three tool kits. Good luck!

The little ones also had their fun at the summer fete:

Kindergarten teachers kept the kids entertained with painting and handicrafts or watched out while they let off some steam on the bouncy castle or the trampoline. The boys and girls could have funny or scary masks painted on their faces at the children's make-up point and there were also plenty of things to nibble on. Those who preferred football on a smaller scale were able to try their luck shooting goals at a target built especially for this purpose by the apprentices.



We wish to introduce: The new trainees in Nufringen and Cham

[DW] In September, eight young people started their training at ENSINGER in Nufringen and four in Cham. We asked them about their previous backgrounds, their motivation to choose ENSINGER and about their hobbies.



Zeljko Selakovic from Böblingen will be trained as a tool mechanic and joins us from the Albert-Schweitzer Secondary Modern School in Böblingen. He thinks ENSINGER is a good company. Playing football and handball are his hobbies.

scout is going to train as a process mechanic.



Also, Sebastian Siegel from Gärtringen is doing an apprenticeship to become a process mechanic at ENSINGER because he

likes the company. He attended the Theodor Heuss Secondary Modern School in Gärtringen. In his spare time he enjoys listening to music.

With the phrase "I have only heard good things about the company", Sascha Schiebel from Gärtringen justified his decision to train as a process mechanic at ENSINGER. He went to the secondary modern school in Gärtringen, and cycling is his hobby.



Ben-David Herrmann from Jettingen-Sindringen was already attending the two-year full-time training college in Nagold, before starting his apprenticeship to become a tool mechanic in moulding technology. He particularly likes the good training which ENSINGER offers. Ben-David likes going out and his hobby is breeding domestic animals.



Alexander Deines from Nufringen is to be trained as a process technician in moulding technology. He attended the secondary school in Nufringen beforehand and applied for this apprenticeship because he likes the occupation very much. In his leisure time he meet friends and plays with his Playstation.



Rainer Hamann from Cologne is a BA student of "Industrial Engineering". He previously attended the Georg Büchner Grammar School in Köln-Weiden. Rainer is at ENSINGER because he thinks the company is good and that it will also offer him good professional openings. In his leisure time he plays sport, likes to listen to music and meet friends.



Benjamin Dalinger from Mötzingen was at the Jerg Ratgeb Secondary Modern School in Herrenberg and chose ENSINGER as a training company "because it is a good firm". The enthusiastic boy



Jasmin Arndt comes from Nagold, where she went to the Christiane Herzog Secondary Modern School. The trainee, who wishes to



A hearty welcome

is, of course, also extended by ENSINGER not only to the apprentices but also to our new employees in Nufringen:

Ursula Fischer	Responsible for internal domestic sales for semi-finished goods
Oguz Reisoglu	Extrusion assistant, Tooling-up, Extrusion of the semi-finished goods division
Georg Deines	Temporary assistant, Raw Materials Preparation
Manfred Knochenhauer	Temporary assistant, Raw Materials Preparation
Nina König	Pre-sales Coordinator, Marketing and Sales Dept.
Roland Kittl	Experimental technician, Process Engineering

We wish you all a successful start at ENSINGER!

become an industrial sales clerk, chose this commercial career at ENSINGER because the company and its field of activities interested her the most. Jasmin likes to go dancing, playing sport and going out.

Lukas Bricha from Cham-Michelsdorf attended the secondary school section II. The apprentice to become a cutting-operations mechanic likes the working atmosphere at ENSINGER. In his spare time he enjoys using the computer.



volunteer fireman and likes playing football and basketball.

Florian Breu from Waf-fenbrunn was also at the Maristen Secondary Modern School. He is doing an apprenticeship to become a tool mechanic because the occupation particularly interests him. He is active in a society interested in traditional costumes, likes playing basketball, dances and listens to music a lot.



Josef Mühlbauer from Ried near Gleißenberg comes from the secondary school in Waldmünchen. The apprentice wishes to become a cutting-operations mechanic and thinks that ENSINGER is an interesting company. His favourite hobby is his moped, and he is also a member of the fire brigade.



For questions and suggestions please send an email to impulse@de.ensinger-online.com

IHK honours ENSINGER trainees

[AST] We are pleased to announce the outstanding successes of the trainees who completed their apprenticeship in the summer: In the commercial field, Rosemarie Wochele participated as the first ENSINGER trainee in the new, extended training examination of the IHK (Chamber of Commerce). For this, apprentices have to work on a specialist assignment in an operational area, write a report about it and, after making a presentation on it, answer questions by the examiners. In particular, it should be mentioned that she not only passed the exam but her outstanding performance was commended by the IHK. So, it is naturally particularly pleasing for ENSINGER that she will stay with us: she has been looking after various foreign customers in internal sales in the export department for some time now. In the industrial area, Michael Rieger and Nico Rösler both successfully completed their apprenticeship as process mechanics. Even before completing his apprenticeship, Michael Rieger was already an obviously good performer in the company. He confirmed this in his examination and also received a



Personnel officer Arnt Stumpf (l.) and Instructor Heinz Lehmann (r.) are pleased about the outstanding results of Rose Wochele and Michael Rieger.

commendation from the IHK for his good performance. He has also accepted an offer from ENSINGER and since completing his apprenticeship has taken up an interesting job in raw material processing. Nico Rösler has decided to continue his education and is now in the process of attending courses to obtain his entrance qualification to a polytechnic college. We would like to congratulate all "graduates" and wish them lots of success in their future careers.

Introductory seminar at Castle Feuerstein

The introductory seminar, which took place at the beginning of September at the Castle Feuerstein, was just the right thing for the debut of our apprentices to get to know the company. Here, the new apprentices for Cham and Nufringen were able to combine making their first contact with the locations, as well as meeting the main contacts from the

human resources department, Mrs. Mirjam Betz and Mr. Arnt Stumpf. All received extensive and interesting information concerning the company and their individual training courses. Amongst other things, topics covered included the expectations of the individuals, getting settled in as an apprentice, team development and productive mutual communication. Whereas on first day mainly theoretical points were discussed around the table, the second day was somewhat more relaxed, and spent mostly outside in the brilliant sunshine with practical exercises, team games and discussions. We all enjoyed the activities and discussions about the trainee programme and the company, as well as the fun round of bowling which finished off the first day. At any rate, these two days provided us with a lot of new ideas, from which we will certainly all be able to profit. It's great that this exists at ENSINGER!

The Apprentices



The impulse Interview

Questions to Martin Baras



Martin Baras is Head of the Sales and Marketing Department at ENSINGER. He has already been with the company six years. "Impulse" spoke to him, amongst other things, about the K-Trade Fair and the motto "ENSINGER Global Innovation".

"ENSINGER Global Innovation" – the motto for K 2004 stresses the global activities of the company. What does that mean?

It is obvious these days that economic activities no longer take place locally. Many of our business partners are "global customers", they develop e.g. in the U.S.A. and produce at several locations in Europe or Asia. "Global" also means that we coordinate specific application developments on a worldwide basis – and still serve our customers locally.

We have decided to use this motto because we consider "Global Innovation" to be a consistent continuation of our way of thinking. With our philosophy "Ask. Think. Succeed" which was introduced three years ago at the K-Trade Fair, we present who we are and what we do: We go into companies, ask there, think about the problem with our engineering experts and come, together with our customers, to a custom-made and individual successful solution. These solutions are utilized by our customers and provide them with competitive advantages. We have the courage to go outside of conventional ways of thinking. We describe ways how to "think around corners". We are really open-minded thinkers, if you like. And that also makes us and our customers so successful.

Are thinking globally and the ENSINGER motto also expressed in the design of the new trade fair booth?

I hope so! We have designed the booth completely anew and can be proud of the result. We wish to show with the basic innovative concept that our focus is not on individual product divisions and their process technologies, but on

the fields of application. After all, customers are not interested in whether their product is injection moulded or machined. An economic and high quality result is important for them!

The basic framework is constructed so that we focus on a particular branch of industry; we then show what can be achieved with ENSINGER – from the raw material to the application.

In the medical frame, for example, we present plastics which are particularly suitable for medical devices in the form of tables showing semi-finished goods. We also exhibit exemplary components and devices, which are already being used successfully in that particular branch of industry.

By the way, the ENSINGER products will not only be shown as exhibits – also very innovative in this case – but are also integrated this time into the construction of the stand. In the area around the bar, for example, we have TECASON-P sheeting illuminated from behind, which creates a cosy atmosphere – and on the second floor the meeting areas are separated from each other by room dividers made of our semi-finished materials.

What are you doing about global communications?

Global communication takes place in our Business Development Group, which we already introduced in the last "impulse": This group is building up a functioning global communication platform with partners in the USA in a network covering the globe.

The permanent global exchange permits us to learn and profit from one another – even if regional and cultural differences still remain. And customers profit from this experience just as we do.

The K-Trade Fair only takes place every three years – how important is it for the company?

The K is of the highest importance for us, as we have the possibility to meet our customers from all over the world there. There is no better opportunity for communication than at such a fair. We can deepen existing relationships there and make new ones – and convince all of them of our capabilities.

Furthermore, we can introduce new products and applications and their positioning within the overall ENSINGER product range "live".

New products at K – what criteria were used for their choice?

This year we have a number of new products to show in those areas where we have our core competencies, including a worldwide first. These were developed partly under our own steam in house, and

also partly in collaboration with customers according to their requirements – customer utility is nevertheless always our major focus.

We are not only presenting new products in the field of "plastics". We will be presenting three new brochures: Firstly, "New Products 2004", a compendium of all new products, which we are showing at "K"; secondly, an extended semi-finished product catalogue and, thirdly, "ASK local. THINK global. SUCCEED together.", a global company publication in which the entire ENSINGER Group and its products are portrayed in detail.

Where do you see the strengths of your team as sales and marketing director?

We have extremely capable and highly qualified sales representatives, who are all without exception plastics engineers and technicians. They concentrate mainly on high performance plastics – although it is not our only objective to focus on these. We guarantee, of course, a competitive willingness to achieve something in the area of construction materials.

Market-orientated thinking requires process-orientated thinking, because our customers wish to have competitively priced products, fast delivery times and variable estimates.

The association of ideas is at the centre of our attention. Because without ideas and a lot of creativity, it would not be possible for our specialists to provide the best possible and most economically interesting solutions to their customers, regardless of how complicated the problem is.

Our route to real innovation leads to customer orientation via unique know-how and unique resources – and vice versa.

How do you address customers?

It is important for me that we address our target groups directly, regardless of whether this happens through personal invitations and informative letters or also by exclusive meetings, when we are able to inform customers and business partners and convince them of our capabilities.

At the K-Trade Fair, for example, we are holding a symposium "From raw material to application", and have invited a selected audience. Well-known speakers will present the latest developments from the industry during a series of lectures.

Mr. Baras, thank you very much for the interview!

Trade fair for off-shore applications

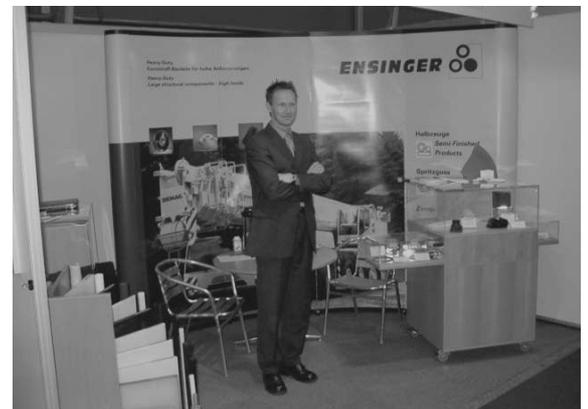
ENSINGER attends ONS in Norway

[D/W] For the first time, ENSINGER Germany participated in this year's "Offshore Northern Seas" trade fair ONS in Norway.

Export Manager Björn Ühlken and Regional Sales Manager Dominik Grohs, with the temporary help of their English colleague Gary Davies, represented ENSINGER at our trade fair booth and answered questions from interested visitors. Many interesting contacts could be made with visitors from industry and the universities.

ONS is the meeting point of the European oil, gas, and energy industry, which has served as a driving force for new business between the players in this sector for 30 years.

The trade fair takes place every two years, alternating between Aberdeen and Stavanger. In particular, high-performance products are used in this industry. Plastics such as TECAPEEK and TECATRON are ideal for applications in the off-shore field, due to their chemical stability and their wide range of temperature applications. And also products from the ENSINGER mono-casting division were called for – in the oil and gas production area. For example, handling plant requiring strengthened rope pulleys and gliding elements made of materials which can take high loads and are resistant to abrasion and wear are needed.



New brochures

At the K Show, ENSINGER issues three new brochures:

- Detailed information on the "New Products 2004"
- The revised catalogue "Semi-Finished Engineering Plastic Products"
- The global company brochure "ASK local. THINK global. SUCCEED together."

You can order them by phone under ++49 7032 819 202 or by e-mail under impulse@de.ensinger-online.com



ENSINGER product unit industrial profiles: Guide track made from TECATRON GF 40 G

[D/W] The company Novotechnik Messwertaufnehmer OHG, Ostfildern, is one of the pioneering companies in the development of measurement technology. The company produces high-powered position and angle sensors, without which global production, control and measurement technology would be hard to imagine these days.

The position transducer TLI is a built-in solution for hydraulic and pneumatic cylinders, which can be operated up to pressures of 300 bar and pressure peaks of 500 bar.

The applications for such TLI position sensors are numerous. Wherever

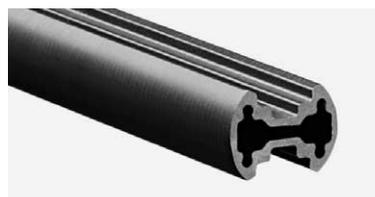
mechanical motion and mobile setups are hydraulically or pneumatically controlled, such precision sensors serve as positioning devices – e.g. in hydraulically height-adjustable ploughs, as positioning devices in hydraulic or pneumatic presses and also in feed units for saws, milling machines and similar machinery. The position sensor placed directly in the cylinder produces an enormous saving in terms of space, and is protected at the same time from dirt and damage.

The actual measuring system works without contact. Wear from resistance layers and sanders, which

usually occurs with potentiometers, is thus eliminated. The slippage due to the change of position can thus be taken over by secondary components, which in this case is the guide track and the sensor holder.

At ENSINGER, the track profile of the TLI position sensor is extruded in the Industrial Profiles and Tubing Division under the project-leadership of Jürgen Walz. The material of choice for this application is TECATRON GF 40 G, which was selected due to its

very good tribological properties, as well as the relatively low thermal expansion at application temperatures of -20 to +80 °C. In addition, it has the required high rigidity and dimensional stability thanks to fibreglass reinforcement.



10 years as part of the ENSINGER group

TRIG Engineering Ltd. celebrates anniversary



TRIG Engineering Ltd, a market leading precision engineering company with almost 40 years experience in the plastics industry, celebrates its 10 year anniversary since becoming part of the ENSINGER group this week. TRIG Engineering itself was established in May 1965. Turnover for the first year of trading was £8,537, and from here the company has gone from strength to strength. By the time of the acquisition by ENSINGER Ltd, turnover was at £1.6 million, with 63 employees. The

success the company has achieved in the last ten years includes trebling turnover, and increasing its staff by a third. Since the acquisition by ENSINGER Ltd on 30th September 1994, the company has undergone many changes, including a move to a new, custom-built, facility in Bridge-water, where it has preferred supplier status for some of the biggest names in different industries. A celebratory day was organised for all TRIG employees in recognition of the success the company has achieved in the last ten years. Managing Director John Speirs said: "I am delighted to announce this important milestone in the unity between ENSINGER and Trig Engineering. The successes we have achieved over the past 10 years are due to the hard work and dedication of the whole workforce at the company. I am proud to say that despite change and progression we still have close links with TRIG's heritage, with TRIG's founder Percy Triggol attending our celebratory day. This day is not only in recognition of our achievements so far but also to look to the prosperous future the company faces."

Language talent and ENSINGER globetrotter retires

[DW] The time arrived this summer for universally popular Dietrich Grötzner to take a well-deserved retirement. He was employed at ENSINGER for over 25 years and was decisively involved in the development of the company and the export department. Right from the start, he was the driving force behind the project "ENSINGER do Brasil" and moved it forward. He was responsible from 1977 to 1998 for global exports of all ENSINGER products. The Building Products Division and the management of the ENSINGER subsidiaries also belonged to his sphere of operations. In his last assignment, he managed the internal sales department for semi-finished goods in the domestic and export business areas. Thanks to his linguistic abilities, Mr. Grötzner became an "Ambassador for the Company" and visited numerous foreign companies and customers throughout the world. Many customers and colleagues know him as an expert in his field, who is always ready to help and who can tell an anecdote about the company history in his sonorous voice.

For example, there is the story about the K-Trade Fair 1978 in Düsseldorf, where he was actually just attending as a "perfectly normal exhibition visitor". The run of customers at the ENSINGER booth was, however, so overwhelming that Martha Ensinger asked him to stay at the booth to act as a client advisor and translator because of his poly-

glot abilities. He was busy around the clock, interpreting in many languages – and was able to make many customer contacts, which still exist today. However: From that day on he has never seen more of the K-Trade Fair than the ENSINGER booth ...

He also still knows stories from the early years at ENSINGER – when enquiries were received by telephone, telex or postcard and one went to the warehouse with a slide gauge in hand in all weathers, in order to check inventories.

And what does one give as a farewell present to someone who has already experienced so much and has simply travelled throughout the whole world? For this, his closest colleagues thought up something special: They purchased on his behalf a spot on the moon, which he really does own by deed!

Dietrich Grötzner is still closely connected to the company and likes to return, when his knowledge of languages and pleasant way of showing visitors around the company are needed.



Dietrich Grötzner amidst his sales colleagues. The three-piece suite was part of the farewell gift from colleagues – as we also want him to be really comfortable in retirement!

Casting training course

[DW] Company associates from many different ENSINGER subsidiaries met from 8th to 11th September for a training course on casting in Cham and Linz. The invitation was extended by Walter Wagner and Dr. Edmund Zenker, the two managers of the casting division. Walter Wagner justified the decision for this meeting as follows: "On the basis of various internal surveys and the experience gained from the most recent Bauma trade fair, we now have a somewhat better view of the market. It was thus a logical consequence to introduce our colleagues from those subsidiaries with particularly good potential in their home markets to the production, sales and basic possibilities offered by casting products".

Product training courses and guided tours through the production areas in Cham (casting and machining shops) and Linz (TECARIM) were part of the programme.

A very special highlight was a look at the calculation software for rope pulleys and support plates, which Dr. Zenker developed in collaboration with the University of Leoben. This tool now makes it possible to respond to all the requirements of the customer at short notice and to check the calculations of the desired parts.

The objective of the meeting was to provide know-how to the subsidiaries which will permit them to achieve success in their own markets as quickly as possible – amongst other things, by duplicating existing applications, as the technical know-how is already available. Furthermore, the meeting was intended to initiate a network of individuals who can also profit from one another in the future. According to Wagner, this was certainly not the last time such a training course would take place. "We plan to invite other subsidiaries in the future and to provide the respective contact individuals with regular updates. We wish to support our global colleagues in customer acquisition and to encourage them to share their experiences afterwards."

If applicable, introduction, training "Sales, customer services, organisation of the division, competition, division of responsibilities ..."

Wagner sales on-the-spot. Zenker technical service on-site and reduce throughput time.

The reason was a two-day basic introduction to the production, sales and general possibilities of casting, in particular for subsidiaries where internal surveys have shown that a very good potential exists.



Klaus Ensinger attended on Thursday. The participants were introduced to the basics of casting and to certain aspects of sales and the organisation of the division was presented. Discussion groups were used to determine where the opportunities and potential lie at the various subsidiaries.

Innovation at the glasstec 2004

Optimised Thermix® warm edge spacers and bars

At glasstec, the world's largest specialist trade fair for glass which takes place from 9th – 13th November in Düsseldorf, ENSINGER will be presenting several highlights from the Building Products Division in Hall 15 booth B 48. For the first time, a completely new Thermo® product range will be shown to the public, which offers exceptional characteristics and convincing technical values. ENSINGER profits in this respect from its experience over the decades with high performance plastics as well as from a broad know-how in the development and production of insulating profiles for windows, doors and façade systems. An extremely efficient product thus emerged, supported by well-known partners from the glass industry.

After more than 10 years of practical experience with Thermix® plastic warm edge spacer profiles, it is possible to optimize the processability in the production of insulating glass. The existing Thermix® warm edge spacers and Thermix® LX warm edge

spacers which have been well-trying and tested over the years. Since August 2004 improved products have been available to the market. The contour optimisation of plastic profiles contributes considerably to the simplification of insulating glass production an increase in processing safety. This second innovation can be seen within the full range together with newly developed corner angles and muntin bars at the ENSINGER stand.

In order also to give the new product range the appropriate, innovative setting, the Building Products Division will exhibit with a completely new stand. Its attractive design will offer an ideal platform for creating a dialogue with customers and interested visitors.

And don't forget this date either: The Building Products Division is also presenting the insulbar® and Thermix® product lines at the BAU 2005 from 17.1. - 22.1.2005. Visit us at the Neue Messe Munich, Hall C2 booth 316. We look forward to seeing you!

Impressum

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