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2010 Annual Conference

15-17 November 2010

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PROVEN QUALITY. LEADING TECHNOLOGY.
Welcome to the 4th PDA Europe Annual Conference  
Bienvenidos a la 4ª Conferencia Anual de la PDA Europa

We are delighted to welcome you here in Sitges, Barcelona for our 4th Polyurea Development Association Europe Annual Conference.

The programme committee and board have organized what we think a dynamic program which we hope meets your different, but complementary interests and goals.

A special highlight this year is the half-day parallel session for our Spanish attendees, during which we offer 5 presentations presented in Castellano!

Practical demonstrations this year will be spearheaded by a three hour comprehensive training course on metal preparation, developed by our PDA Europe Training Committee.

New this year, is the special Technical Hot Spot Desk session during which a panel of qualified polyurea technologists will answer your questions around applications, properties and more.

The conference will give attendees the opportunity to network with international industry representatives. It is structured to include plenty of time to build long-standing relationships in a focused, yet relaxed environment whether over coffee, an evening drinks reception or an informal conference dinner.

We are delighted you have chosen to be a part of this fourth PDA Europe Annual Conference and are looking forward to a successful conference.

Yours sincerely,

Tania Van Buyten  
PDA Europe Programme Committee Chairperson.

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**PDA Europe Introduction to Polyurea for the Applicator and Contractor**

One of our most popular courses designed specifically with the applicator and contractor in mind, this session expands on topics of physical properties of polyurea, application procedures and techniques, and advances in and types of equipment.

Trainers: Cees Moorman & Stefan Priemen

*Price:*
Member 125 EUR, Non-member 225 EUR
On site registration possible, payment by credit card only

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**PDA Europe Metal Surface Preparation Course**

Improperly prepared metal surfaces can result in reduced coating performance and service life. The greatest percentage of coating failures can be traced directly to poor surface preparation, which affects coating adhesion. The correct preparation of metal surfaces, starts with the coating-compatible design of the steel surface and the components, the procedures for removing of any types of contaminants, which can cause failures of the coating by way of preventing a bond from developing, and the methods to receive a proper surface profile to increase the bond strength of the coating system.

More details on surface evaluation and preparation techniques supported by practical demonstrations.

Trainer: Bernd Dietz

*Price:*
Member 200 EUR, Non-member 400 EUR.
On-site registration possible, payment by credit card only.
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| Tue 16 Nov | **Registration Desk 08:30 – 17:30**  
*Conference room: Garbi*  
09:00 – 09:30 Welcome to the fourth PDA Europe Annual Conference  
09:30 – 10:30 **Greece on the Polyurea Map: Revisited**  
*C. Kahramanoglu (Viapol)*  
**Assessment of Release of Dangerous Substances – Actual CEN Activities Concerning Test Methods for Construction Products**  
*I. Hohberg (Deutsche Bauchemie)*  
10:30 – 11:00 Break + exhibition  
11:00 – 12:00 **Modified Polyurea for Wood Protection Without Need for a Primer**  
*A. Descampe (Imexfa)*  
**Polyurea Elastomer for Extreme Applications**  
*A. Ivanov (Chimex)*  
12:00 – 14:00 Lunch + Exhibition - *Room: Atrium*  
14:00 – 17:00 **Parallel sessions: English - Room: Garbi**  
*Polyurea Coating Composites*  
*K. H. Wuehrer (Bayer, PDA Europe President)*  
**Petrol Station Chemical Resistant Flooring**  
*C. Moorman, (BASF Polyurethanes Benelux, Chairman of the PDA Europe Training Committee)*  
**The use of Polyurea in the Refurbishment of Water Tanks**  
*H. Herault (Krypton Chemical)*  
15:30 – 16:00 Break + Exhibition - *Room: Atrium*  
16:00 – 17:00 **Polyurea Waterproofing Membrane**  
*M. Broekaert (Huntsman)*  
**Polyurea Coating Composites**  
*K. H. Wuehrer (Bayer, PDA Europe President)*  
**Fenix Polyurea Series 600**  
*E. Domingo (Group Fenix)*  
17:00 – 18:00 Technical Hot Spot Desk  
18:30 Dinner  
| Wed 17 Nov | **Registration Desk 08:30 - 14:30**  
*Conference room: Garbi*  
09:00 – 10:30 Annual Meeting  
1. Committee activities presentation  
2. Financials – YTD  
10:30 – 11:00 Break + exhibition  
11:00 – 12:30 **The Norwegian Moonlanding Project**  
*E. Michelson, Elmico*  
**Sustainability in Coating**  
*S. Reinstadtler, Bayer USA*  
**Polyurea Dam Repair in France**  
*M. Mahaffey, Wiwa*  
12:30 – 13:30 Lunch + exhibition  
13:30 – 14:30 **Putrajaya Mosque - A Case Study**  
*L. Bower, Polyvers*  
**Concrete in Biological Treatment Plants Needs Protection**  
*Y. Edwards, Swedish Cement Research Institute*  
14:30 – 14:45 Thanking note from New President  
15:00 – 16:00 Board Wrap-up Meeting |
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**Greece on The Polyurea Map: Revisited**

*Christos Kahramanoglou, Viopol*

*Tuesday, 16 November, 09:30*

Christos Kahramanoglou has a MA from Oxford University and a MSc from London School of Economics. He has been working in the polyurethane systems industry since 1999. 2005 he became General Manager of systems house VIOPOL, which has been established in Greece since 1974. VIOPOL is a leader in the polyurethane and polyurea systems market. Member of HACI and PDA.

Diverse polyurea projects in Greece. Decorative archway for new shopping mall by the sea, primary containment for water treatment, spray coating a floor in a deep freeze warehouse.

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**Assessment of Release of Dangerous Substances – Actual CEN Activities Concerning Test Methods for Construction**

*Inga Hohberg, Deutsche Bauchemie*

*Tuesday, 16 November, 10:00*

Inga Hohberg has studied chemistry at the University of Aachen 9 years, from 1982 to 1991. She has also worked as scientist at “Institute for building materials research of Aachen University” from 1991 until 2000. 2000 she became a PhD in Civil engineering. Since 2002 referent of “German Industry Association for Construction dealing with technical and environmental properties of construction chemicals.

Polyurea products can be used for a wide range of different applications and there are many possibilities to introduce polyurea products into several technical harmonized CEN-Standards or other technical regulations like ETAGs. In future – especially under the new Construction Products Regulation - the mandated CEN-Standards will also have requirements concerning the behaviour of construction products in contact with the environment – thus the emission into indoor air will be validated as well as the emission into soil and ground water and surface water. Harmonized test/calculation methods/models for assessing the construction products are being developed in CEN/TC 351. The presentation will give an overview on the activities in CEN/TC 351 and the consequences in view of polyurea products.

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**Modified Polyurea for Wood Protection Without Need for A Primer**

*Alain Descampe, Imexfa*

*Tuesday, 16 November, 11:00*

Has a master degree in engineering and a degree in economics from Louvain La Neuve University. He specialized in mining, mineral process development and ultrafine grinding before focusing on the development of thermodur resins.

Alain played a pivotal role in introducing polyurea into the French market and developed several specific polyurea systems for dedicated applications. He is now formulating for the company Imexfa in Belgium.

Till today, polyurea application for wood protection has been restrained by the need of a primer to avoid pin holes in the final film. This prerequisite has large implications on the process organization and its profitability.

This paper will explain, through case studies, how this situation may be unlocked with a new polyurea family.
Polyurea Elastomer for Extreme Applications

Alexey Ivanov, Chimex  
Tuesday, 16 November, 11:30

Born in Saint Petersburg, Russia in 1974. Received M.Sc. in Organic Chemistry at Saint Petersburg Institute of Technology in 1997. Had a PhD thesis on peptide synthesis. Spent 2002-2003 in USA working for a pharmaceutical company as an organic heterocyclic chemist. Have been serving as Deputy Technical Director of Chimex Limited as well as Head of R&D Department since 2005.

To extend the polyurea application we had to start formulating the polyurea having improved physic-mechanical properties and the chemical resistible polyurea as well. Protection of concrete from aggressive media in a water treatment plant, roofing in a very cold region of Russia, bridge deck water proofing in Saint Petersburg are just examples of where polyurea can be used now.

Polyurea-Coating Composites

Karl H. Wuehrer, Bayer and PDA Europe President  
Tuesday, 16 November, 14:00

After joining Bayer in 1987 he worked in the development/marketing group of corrosion protection and solvent-free polyurethane coatings. In 1998 Karl Wuehrer moved to Barcelona/Spain for heading the technical service group construction materials Iberia. Following a second international assignment in Pittsburgh/USA as a business development manager for concrete protection, 2002-2005, he headed the aromatic polyurea flooring group in Leverkusen. From March 2007 – February 2009 he was the market development manager for construction within the business development group prepolymer. Since March 2009 he is in charge of the polyisocyanate systems construction group.

Since the first application in the construction market polyurea-waterproofing systems have fulfilled the performance requirements without meeting any esthetically claim. Due to new applications, e.g. theme parks, during the last years, the requirements for waterproofing systems have added also decorative aspects. End-users like Disney or Baseball franchises are not longer accepting black, yellow or green surfaces. They even want to combine the waterproofing properties with colors. Polyaspartic-Coatings have fulfilled this request regarding decorative issues. However there is nearly no information available about the intercoat adhesion and the recoat window of “classic” polyurea coatings with decorative topcoats. This presentation will give an overview about the developments done during the last 2 years regarding the evaluation of the recoat window of polyurea-composites, primer-sprayed polyurea-Polyaspartic top coats.

Petrol Station Chemical Resistant Flooring

Cees Moorman, BASF Polyurethanes  
Tuesday, 16 November, 14:30

Started his career in 1978 as a mechanical process engineer with a company specialized in the production of polyurethane roof insulation solutions. In 1983 he moved to the Polymer Chemical Company BV where he was working on several polyurethane applications, after 1997 primarily on the application and market development of polyurea products. He is stationed out of the Netherlands, working on application with polyurea on a variety of substrates but mainly focusing on concrete and applications in the transport branch. Now is employed by BASF polyurethanes Benelux B.V. as a Business Team Leader for their CASE business in the Benelux.

Traditionally petrol stations are waterproofed to prevent leakage of petrol and diesel into the soil, by means of rubber hexagonal tiles, the joints between the tiles are sealed using a joint sealer. These joints typically fail after one or two years in service. BASF developed a system for this application, based upon a crackbridging, aromatic sprayed membrane, and topcoated with a colorstable hand-applied polyaspartic, which is sanded in for antiskid purposes. This system has been tested and approved according the EN 2812-1.
The Use of Polyurea in The Refurbishment of Water Tanks

Hugo Herault, Krypton Chemical
Tuesday, 16 November, 15:00

Krypton Chemical was set up in 1999. Its main goal is to develop new technologies based on polyurea, polyurethane and polysapartics into the construction, civil engineering and maintenance industries. The company has a factory in Spain and subsidiaries in the UK, France and Chile, as well as distributors and approved installers in many countries.

For its hot spray applied developments, the company has a dedicated technical centre in Spain, where it has a technical manager and develops all new systems in cooperation with its approved installers and customers.

In the last few years, the company has been developing a full range of polyurea, polyurethane and polysapartic systems which are extremely successful in the applications targeted for each technology.

There is a big demand in most countries to repair old water tanks which have cracks and leak. The loss of water is not only a cost in itself, but also the chlorine content in the water poses a significant risk in that it will damage the steel reinforcement and stressing strands which would inevitably lead to structural failure of the tank.

Customer criteria when choosing a repair system are:

1. A product that can be applied to the existing surface with minimal repair work and preparation to the existing structure.
2. Fast curing time to enable the reservoir to be filled with minimal down time.
3. Durable and capacity to withstand walking on to enable other work being carried out without delay.
4. Certified to EU standards and for use in the storage of drinking water.
5. Sufficient elasticity to withstand the expansion and contraction of the joints and cracks as the tank is filled and emptied and thermal movement.

A Polyurea Waterproofing Membrane, The Ideal Surface Preparation for Huntsman’s Innovative Green Roof VYDRO® Substrate Foam.

Marc Broekaert, Huntsman
Tuesday, 16 November, 16:00

Marc Broekaert obtained a university Degree in Chemistry at the State University of Gent in 1980. From 1980 to 1984 he got an informatica training and worked as a software developer. In 1985 he started as a research chemist with Casco Nobel Benelux (ex-Mader Benelux) working on industrial coatings with a specific focus on coatings for plastics.

In 1992 he became technical director with HSH Aerospace Finishes responsible for the development and manufacturing of waterbased repair and coating systems for aircabins. Since December 1998 he is working for Huntsman Polyurethanes, first ACE business unit developing coating solutions based on MDI technology for the coatings market with a special attention for polyurea technology and the last 6 years on longer term projects on new technologies.

In 2007 he was one of the founding members of the PDA Europe and the first president.

Polyurea spray coating has proven its performance as a waterproof membrane on roofs over many years. While Huntsman’s innovative green roof VYDRO® substrate foam, offers benefits to the building owner and the environment of exceptional water managment and light weight. Combining the technologies gives a green roof solution which is cost effective, lightweight and VOC free. This presentation highlights the performance of each technology, documented with a case study on the roof from a building at the Huntsman site at Everberg, Belgium.
El uso de la Poliurea en la Rehabilitación de Depósitos de Agua

Hugo Hérault, Krypton Chemical
Tuesday 16 November, 14:00

Krypton Chemical inició sus actividades en el año 1999. Sus principales actividades son el desarrollo de nuevas tecnologías basadas en Poliureas, Poliuretanos y Poliaspárticos, dirigidas a los mercados de la construcción, obras públicas y mantenimiento industrial. La empresa cuenta con una factoría en España y filiales en Gran Bretaña, Francia y Chile, así como distribuidores y aplicadores homologados en diversos países.

Para los desarrollos en el campo de las tecnologías Hot Spray, la empresa cuenta con un centro técnico en España, en donde el responsable técnico de este mercado desarrolla y hace la puesta a punto de los diferentes sistemas en colaboración con los aplicadores homologados de la empresa y principales clientes.

Durante los últimos años la empresa a desarrollado con éxito una gama completa de poliureas, poliuretanos y poliaspárticos que cuentan con gran aceptación en los diferentes mercados a los que se dirige cada uno de estos sistemas.

Hay una gran demanda en muchos países para la reparación de depósitos de agua potable que presentan grietas y pierden agua. La pérdida de agua no es tan sólo un coste en sí misma (mayor cuanto más importante es la escasez de agua en el país) sino que además el cloro contenido en el agua genera un riesgo importante perjudicando la estructura y refuerzos de acero lo cual conlleva eventualmente una total degradación del depósito.

Algunos criterios importantes a la hora de elegir el método de reparación para un depósito de agua potable son:

1. Un sistema que pueda ser aplicado a la superficie a tartar con un mínimo de trabajos de reparación y preparación de la estructura existente.
2. Curado rápido para permitir que el depósito de agua pueda ser llenado de nuevo con un mínimo de tiempo de espera.
3. Con capacidad de permitir el tráfico de los operarios por encima del producto y poder así llevar a cabo otras tareas sin retrasos.
4. Certificado para el uso en contacto con agua potable.
5. Con suficiente elasticidad para permitir las expansiones y contracciones de las juntas y fisuras que se pueden dar cuando el tanque se llena y vacía, y en casos de cambios térmicos.

Krypton Chemical ha tenido un éxito importante en la rehabilitación de diferentes depósitos de agua en Irlanda, usando un sistema de Poliurea formulado por la empresa que tiene homologación para agua potable según el Real Decreto 140/2003, equivalente en España de la Directiva Europea 98/83/CE.

Suelos Químicamente Resistentes para Gasolineras

Albert Camp, BASF
Tuesday, 16 November, 14:30

Albert Camp empezó su carrera en 2001 en el laboratorio de ensayos físicos de Elastogran SA, analizando y definiendo las propiedades mecánicas de los sistemas en base poliuretano. En el 2002 promocionó al puesto de técnico ofreciendo, primeramente, asistencia a los clientes y desarrollando nuevos productos en el area de CASE y, posteriormente, centrándose en la aplicación de sistemas poliurea e híbridos. Actualmente, trabaja para BASF Poliuretanos Iberia como Sales & Technical Advisor de CASE.

Para prevenir la filtración de gasolina y diesel al suelo, tradicionalmente, las gasolineras se impermeabilizaban mediante losas de goma hexagonal y sus juntas eran selladas con un sellante. Estas juntas, después de uno o dos años, normalmente, pierden sus propiedades. BASF ha desarrollado un sistema para esta aplicación. Una membrana aromática esprayedaba basada en una rotura de puente y con un topcoat poliaspártico encima resistente a la decoloración, el cual es arenado para conseguir un acabo antideslizante. Este sistema ha sido probado y aprobado según la norma EN 2812-1.
Membrana Impermeabilizante de Poliurea como Preparación Ideal de la Superficie para la Innovadora Espuma VYDRO® de HUNTSMAN para Cubiertas Ecológicas.

Santiago Anguera
Tuesday, 16 November, 15:00

Santiago Anguera es Licenciado en Ciencias Químicas por la Universitat Rovira i Virgili (Tarragona) y MBA por EADA (Barcelona). Ha desarrollado su carrera en el mundo de los adhesivos, recubrimientos y termoplásticos. Entró en HUNTSMAN en 2003 como Sales Manager ACE (Adhesives, Coatings and Elastomers) para la región Iberia y Magreb. Durante todo este período ha estado activamente promocionando y desarrollado numerosos proyectos de formulación y aplicación de poliureas.

La proyección de poliurea como impermeabilizante en cubiertas ha demostrado sus buenas propiedades durante muchos años. La innovadora espuma y sustrato VYDRO® para cubiertas ecológicas, ofrece no solamente beneficios a la propiedad del edificio sino al medioambiente.

Combinando las tecnologías obtenemos una cubierta ecológica eficiente en coste, ligera en peso y libre de VOCs. Esta presentación destaca las propiedades de cada tecnología. Ilustrada en un caso práctico de una cubierta en la sede central de HUNTSMAN en Everberg, Bélgica.

Polyurea-Coating Composites

Karl H. Wuehrer, Bayer and PDA Europe President
Tuesday, 16 November, 16:00

Karl Wuehrer ingresó en Bayer AG –Leverkusen- en el año 1987, trabajando durante los primeros años en los departamentos de Marketing / desarrollo de pinturas anticorrosivas / poliuretanos sin disolventes.


"Ya desde sus inicios, los sistemas de poliurea empleados en el sector de la construcción han cumplido con las exigencias del sector de la impermeabilización sin mayores pretensiones estéticas o decorativas. En estos últimos años, debido a su empleo en nuevas aplicaciones como por ej. parques temáticos, a los habituales requisitos exigidos a los sistemas impermeabilizantes se han añadido también los aspectos decorativos. Usuarios finales, como Disney o franquicias de béisbol, no aceptan por más tiempo superficies a base de los usuales colores negro, amarillo o verde. Por ello quieren combinar las propiedades impermeabilizantes pero en base a otros colores (por ej. con imágenes de la compañía). Las pinturas Poliaspárticas cumplen con dichos requerimientos en relación a los aspectos decorativos. Sin embargo no hay apenas información disponible acerca de la adherencia entre capas y la ventana de repintado existente entre las "clásicas" pinturas de poliurea y las pinturas decorativas Poliaspárticas de acabado.

En esta presentación se dará una visión general de los desarrollos efectuados en estos 2 últimos por lo que se refiere a la evaluación de la ventana de repintado de los sistemas poliurea-composites, impresión–poliurea de proyección- acabados Poliaspárticos".

Fenix Polyurea Series 600

Eusebio Domingo, Group Fenix
Tuesday, 16 November, 16:30

Gran experiencia en Detergencia Industrial y Doméstica.
Tramitación de documentación de registros oficiales de productos.
Experiencia en intermedios.
Experiencia en Epoxis, Poliuretanos y Poliureas.
Gran experiencia en aplicación In-situ.
**Norwegian Moonlanding Project**

*Elisabet Michelson, Elmico*
*Tuesday, 17 November, 11:00*

Elisabet N Michelson is managing director of Elmico AS. She is mainly working in marketing and development of thermosetting plastics. Elisabet started her career in RescomMapei AS in 1988, after Polymeric Science study in Sweden, and was responsible of the development of Epoxy and Polyurethane.

A trial plant for CO2 capture will be covered with an internal lining of polyurea. The process will be more efficient and more cost effective compared to the traditional lining with vinylester and glassfibre reinforcement. The trial plant will be a model for future process plants all over the world.

**Sustainability in Coatings**

*Steven Reindstadtler, Bayer USA*
*Tuesday, 17 November, 11:30*

Steven Reindstadtler is the Market Development Manager - Construction for the Coatings, Adhesives, and Specialty (CAS) division at Bayer MaterialScience. He has been with Bayer MaterialScience for 22 years working in a variety of technical and marketing positions in both the CAS and PU divisions. Steven is also in charge of the Sustainability initiatives for the CAS division, working closely with architectural and engineering firms that build infrastructure with sustainability in mind. Steven holds a B.S. degree in Chemistry with a Polymer Science option from the University of Pittsburgh and is an active member of several professional societies, committees, and organizations including ACS, SSPC, ACA, PDA, and CPI.

Participants will learn what sustainability means for polyurea coatings and understand some of the industry drivers for this class of products. Discussing the preferred attributes of the chemistry and case histories will help you to discover sustainable ways polyurea can be employed. Additionally, learn about high performance sustainable topcoat technologies that are used in conjunction with polyureas to extend their desirability into a number of environments and markets such as decorative concrete and other areas where color retention and weatherability are demanded.

**Polyurea Dam Repair in France**

*Murphy Mahaffey, Wiwa*
*Tuesday, 17 November, 12:00*

Murphy Mahaffey has 16 year of experience in the polyurea industry and is currently the Director of International Sales for WIWA Wilhelm Wagner GmbH & Co. KG. He gives frequent industry presentations to associations including PDA, PDA Europe, SSPC and ACMA. He contributes articles to industrial journals and has been published in JPC&L, PDA Podium, PCE, Coatings Pro and Spray Foam magazines. Current member of PDA Europe and SSPC.

This is a job profile of polyurea work that was done on a (water) dam in France. The work was difficult and required the use of rope and harness to access the spray areas. Dam condition, material selection, preparation and application will be covered in the presentation. Multiple application pictures and some video will be used in the presentation to show the scope of the successful job.
PRESENTATIONS & CASE STUDIES

Putrajaya Mosque—A Case Study

Lee Bower, Polyvers
Tuesday, 17 November, 13:30

Lee is the President of PolyVers International, a division of VersaFlex Inc. He is past president of the PDA US, past liaison director of PDA EUR, and former member of the committee to establish PDA China. He has been involved with the PDA since 2000 and served on various committees and advisory groups. He has been involved in polyurea since the early 1990’s as sales director for Texaco Chemical.

After relocating the government offices from Kuala Lumpur to a new site in Putrajaya, the center piece of the development is the national mosque of Malaysia. Built about 10 years earlier, the lower sections and roof developed enough leaks that the lower 5 floors became unusable due to mold, water, and odor. A 1 year plan to re-water proof the deck and umbrella roof was initiated. Polyurea, a relatively new technology for Malaysia, was ultimately chosen due to its successful history and performance. However, the deal was closed by referencing the strong and detailed specifications, testing, and performance developed by the PDA and SSPC. This presentation will walk through the steps of the application and cross referencing the specifications required to complete this successful project.

Concrete in Biological Treatment Plants Needs Protection

Ylva Edwards, Swedish Cement and Concrete Research Institute
Tuesday, 17 November, 14:00

Since November 2009, I am employed by The Swedish Cement and Concrete Research Institute (CBI) as Senior Researcher. Before that, I was employed at the Royal Institute of Technology within Highway Engineering for ten years. I got my Doctoral degree there in 2005 (Influence of waxes on bitumen and asphalt concrete mixture performance). I also worked at the Swedish Road and Transport Research Institute (VTI) for many years as researcher and research leader within different highway material areas. Examples of products covered in my research are bituminous binders and mixtures for roads, runways and bridges, waterproofing materials, polymers and road marking materials.

This paper describes selected parts of a joint study regarding degradation and corrosion problems for concrete at biogas and composting plants in Sweden. Results from a recent Waste Refinery research project clearly show that concrete used in such plants cannot resist attack by leachate from food waste. Test samples from a number of treatment plants were tested in the laboratory and found to be acidic, containing several aggressive chemical components for concrete. Furthermore, the temperature during food waste treatment will increase to around 70°C in the process. Mechanical abrasion from gathering vehicles in receiving halls also has to be considered.

Regardless of concrete quality, degradation and corrosion problems will sooner or later occur in biological treatment plants. Consequently, the concrete needs surface protection of some kind, and selected protection products or systems need to perform satisfactory in the current environment. Requirements specification and testing program need to be developed to ensure the function of the surface protection as well as the concrete in different parts of the treatment plant. This is now being done within a second part of the Waste Refinery project. For the surface protection of concrete in biological treatment plants, possible technologies may involve epoxy, polyurea, polyurethane, MMA and bitumen based products and systems.
**Company:** Bayer MaterialScience (BMS) is a renowned supplier of high-tech materials and innovative system solutions. Products with leading positions on the world market account for a major share of sales, in particular plastics and their precursors. Principal customers are the automotive and construction industries, the electrical/electronics sector and manufacturers of sports and leisure articles, packaging and medical equipment.

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Karl.wuehrer@bayer.com; www.bayermaterialscience.com

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**Company:** GAMA manufactures and distributes equipment and accessories for the Urethane Industry. GAMA has a team of engineers and technicians with more than 20 years of experience in the Design and Manufacturing of PU High Performance Spray/Pour Machines. A solid project addressed to people and companies that require exclusiveness, functionality, quality, and reliable service, but not loosing flexibility and adaptation capability to the constant market changes. GAMA Products Line: High Tech Spray & Pour Equipment for Polyurethane Foam and Polyurea applications.

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**Company:** Founded in 1926, GRACO is a world leader in fluid handling systems and components. GRACO products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, construction/renovation and industrial/automotive settings. GRACO’s ongoing investment in fluid management and control continues to provide innovative solutions to a diverse global market. GRACO’s European Headquarters are based in Maasmechelen, Eastern Belgium. Main activities include assembly, distribution, customer service, technical assistance, sales and marketing. GRACO employs about 160 people in Europe. We work with many distributors and service partners throughout Europe to guarantee customer satisfaction.

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**Company:** Huntsman Performance Products is one of the world’s largest manufacturers of amine products and offers a brand new technology to formulators wanting to modify the cure speed of polyurea and polyurethane-based systems to give their customers more open time and control for specialist coating, elastomer, adhesive and sealant applications.

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**Company:** REMA TIP TOP has more than 80 years experience in marketing of high quality products and first-class professional service for industrial applications. Throughout the world the name REMA TIP TOP has become synonymous with reliability, service and innovation. REMA TIP TOP GmbH operates as an independent company within the STAHLGRUBER Group. Polyurea-spray coatings complementing the product range of conventional hard and soft rubber linings, VE and EP based flake coatings and laminate linings as well as PU coatings for corrosion protection applications and can be used alternative to rubber components for wear protection of steel components.

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bernd.dietz@tiptop.de; www.rema-tiptop.com
Company: Nitroil Polyurea is an ISO 9001 and 14001 certified manufacturer of amines / raw materials for coatings. In addition, Nitroil supplies versatile polyurea systems for wide-ranging applications in construction, corrosion protection and refinery, including biogas, sewage treatment and pipelines. With new 3 to 10 m³ blending reactors, toll production of polyurea compounds and private labelling complete the offered service for customers. Equipment-wise, Nitroil Polyurea is the exclusive distributor of the new WiWa 460 polyurea dispensing equipment line besides specialty application equipment such as 360° or rotational spray heads for manholes and pipelines.

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Company: Voelkel-Industrial-Products (VIP), a medium size company operating internationally has focused on the development, the production and the marketing of special products such as: A) 2-Part Pure Polyurea Systems (aliphatics, aromatics): The most modern High-Tech Performance Technology for coatings-, joint-fillings, sealings and repair of almost any surface, specially concrete and steel in construction; and B) 2-Part Adhesives and Sealing-Compounds: Polyurethane, MS-Polymer, Epoxy, Methacrylate, Cyanacrylate (1K Super-Glue)
Customers are the industry, construction, trade organisations and clients who sell under their own brand (private label). Quality, flexibility and our renowned service have established our reputation as a reliable supplier for more than 25 years. The company was founded 1982 in Munich, Germany, is privately held and managed jointly by the founder Michael U. Voelkel and his son Alexander Voelkel.

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Company: Albemarle provides innovative development, manufacturing and marketing of complex chemicals and services that create customer value and shareholder wealth. Focusing on “Chemistry for life”, they are a global supplier of specialty chemicals that provide an overall benefit to the world in which we live. Albemarle is a global developer, manufacturer and marketer of highly engineered specialty chemicals. Their operations are managed and reported as three business segments: Polymer Solutions, Catalysts and Fine Chemistry. Albemarle supplies three main types of polymer solutions: flame retardants, curing agents and antioxidants.

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Company: Plasfi group is one of the leaders in the field of Polyurethane (PUR, PIR, ELASTOMERS) with over 30 years of know-how and experience. In our production sites (more than 20.000 m²), in Spain, Argentina and China, we have the most modern technology for the polyurethane production. In our laboratories, Plasfi has the most advanced quality control methods, to make sure an high quality level of the products we manufactured and commercialised, in all and every production phases, from the reception of raw materials to the finished product, delivered at our clients home. Our specialized team of chemists, engineers and salesmen, cooperate to develop shared projects, in order to achieve specific solutions, for each and every customers.

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Company:
BASF Polyurethanes GmbH is a member of the BASD Group. BASF Polyurethanes GmbH, a market and technology leader in polyurethane systems and special elastomers, comprises the headquarters in Lemförde (Germany) and eleven System Houses with twelve sites in Dubai, France, Great Britain, Italy, Netherlands, Russia, Sweden, Spain, South Africa, Turkey and Hungary. BASF Polyurethanes GmbH supplies BASF base materials for polyurethane throughout Europe and develops, produces and distributes polyurethane systems as well as special thermoplastic (Elastollan) and cellular (Cellasto) elastomers as highly refined specialty materials. Furthermore BASF Polyurethanes GmbH offers customised high-performance polyurea systems and isocyanate raw materials for polyurea producers.

Polyurethane (PU) is a versatile plastic for a wide range of applications. The properties of the material can be tailored to suit all needs. PU products are successfully employed in the automobile industry, for thermal insulation in construction work both above and below ground, in cooling technology, electronics, shoes and furniture manufacturing as well as sports and leisure equipment.

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Conference Registration
The Registration desk, where participants can collect their conference portfolios and badges, is located in front of the Conference room - "Garbi".

Exhibition
The exhibition area is located in the “Atrium” room.
Exhibition times:
Monday 15 November: 19:30 -20:30
Tuesday 16 November: 10:30 - 11:00; 12:00 - 14:00; 15:30 - 16:00
Wednesday 17 November: 10:30 - 11:00; 12:30 - 13:30

Dinner on Tuesday 16 November
The dinner on Tuesday 16 November will take place at the Torres Vinyeyard Cellar.
2 buses will leave from the hotel at 18:45.
All participants are requested to meet in the lobby of the hotel at 18:30.

Any changes will be posted at the registration desk.
Dress code: casual.

Conference language
The official language of the PDA Europe 2010 Annual conference is English. However, 5 presentations will be given in Spanish on Tuesday 16 November from 14:00 to 17:00.

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08870 Sitges, Barcelona, Spain
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www.melia-sitges.com
Check in: 15:00 PM / Check out: 10:00 PM
The Polyurea Development Association Europe

PDA Europe is the official trade association for the European Polyurea industry. Registered as an official, international not-for-profit association under Belgian law in June 2007, PDA Europe promotes the highest possible standards for polyurea. Leading experts from across Europe's chemical industry make up the membership base of PDA Europe providing expert advice on product quality. The association also offers best practice information on areas of environmental consideration and safety and provides an established networking forum for key industry players to discuss the future of the polyurea market.

PDA Europe commits itself:
• To pursue the interests of the European polyurea industry;
• To promote the exchange of ideas for the development of the highest standards and operating efficiency within the European polyurea industry;
• To develop methods for improving the conditions and advancing the best interests of the European polyurea industry;
• To create lasting good will between the members and those who manufacture, specify, apply and purchase polyurea materials and services all around Europe;
• To support and promote equal opportunity for all people within the industry, regardless of race, color,

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Guidelines for PDA Europe Members and Conference Participants on the Application of Anti-trust / Competition Rules to Trade Associations

1. Activities of trade associations must comply with the relevant competition/antitrust rules. The same basic principles that govern anti-competitive arrangements also apply when trade associations are used to co-ordinate commercial activities.

2. Violations of competition laws carry serious consequences. For example, the starting level for a cartel fine in the European Union (EU) is €20 million per company. This figure can be adjusted depending on the circumstances (up to a maximum of 10% of the annual turnover of the entire group to which that company belongs). Under EU law, it is also expressly provided that trade associations themselves can be made subject to a fine up to 10% of their turnover.

3. Competition/antitrust authorities in the U.S., the EU and elsewhere are focusing increasingly on the activities of trade associations. The suspicion is that such associations are a cover for cartel-like behaviour (e.g., price-fixing, collective discrimination, etc.).

4. International cooperation among antitrust enforcement authorities is also evident. It is no longer uncommon for governments – particularly the U.S., the EU, Canada and Japan – to coordinate simultaneous searches, service of subpoenas, and ‘drop-in’ interviews (‘dawn raids’) to avoid premature disclosure of an investigation and the possible destruction of evidence.

5. As with U.S. antitrust law, it is not necessary for arrangements violating EU competition rules to occur in the territory of the EU.

6. Equally important, competition concerns will also arise where there is no actual effect on competition in the market concerned. The authorities will intervene where they perceive there to be a potential effect, even where that effect is not intended.

7. In general, it should be borne in mind that competition/antitrust rules prohibit arrangements between competitors, which are intended (or have the effect) to achieve aims such as the following:
   - Price-fixing: almost any activity, which would allow its members to co-ordinate their pricing policies.
   - Market-sharing or customer allocation: activities aimed at dividing the given market concerned into distinct territorial markets or allocating customer groups.
   - Collective boycotts: a requirement to deal only with other members or to boycott other firms.
   - Information-exchange arrangements: in general, all exchanges of business information (such as pricing policies, costs or sales figures) between competitors, which would allow them to co-ordinate their commercial strategies.

8. In addition, certain types of activity particular to trade associations are subject of specific consideration including:
   - The setting of membership criteria of a trade association;
   - Research and development carried out or co-ordinated by a trade association;
   - Joint publicity and promotion of the generic products by a trade association; and
   - Product standardisation, certification and quality measures administered through trade associations.

9. This brief note and the “Dos” and “Don’ts” are intended to give general guidance only with regard to competition/antitrust laws. Before taking action, particularly regarding any assessment of risk, companies are advised to request specific advice from the relevant legal counsel.
The general “DOs”

DO UNDERSTAND the purposes and authority of each PDA Europe group or activity in which you participate.

DO INSIST that written agenda are prepared for all PDA Europe meetings, are circulated in advance and are adhered to during the meetings.

DO APPOINT someone in attendance to take notes and prepare minutes at every PDA Europe meeting.

DO OBJECT at any time when meeting minutes do not accurately reflect the matters, which transpired at the meeting.

DO CONSULT with PDA Europe counsel and your company counsel on all antitrust/competition questions relating to PDA Europe meetings and activities.

DO PROTEST against any discussions or meeting activities which appear to violate antitrust/competition laws.

DO LEAVE any meeting at which you feel that matters discussed continue to raise competition concerns and request that your leaving be recorded in the minutes.

DO ADVISE PDA Europe counsel of any activities in or surrounding PDA Europe meetings that might violate antitrust/competition laws.

DO COMPETE vigorously and independently at all times.

The general “DON’Ts”

DO NOT, in either fact or appearance, discuss or exchange comments or other information regarding:

- Individual company prices, price changes, price differentials, mark-ups, discounts, allowances, credit terms, or related financial issues, data that bear on price (e.g., costs, production, capacity, inventories, sales), market shares etc.
- Industry pricing policies, price levels, price changes, differentials, and the like.
- Changes in industry production, capacity or inventories.
- Bids on contracts for particular products and procedures for responding to bid invitations.
- Plans of individual companies concerning the design, production, distribution or marketing of particular products, including proposed territories or customers.
- Matters relating to potential individual suppliers that might give the effect either of excluding them from any market or of influencing the business conduct of firms toward such suppliers or customers.

DO NOT, even in jest, discuss or exchange information regarding the above matters during social gatherings incidental to PDA Europe-sponsored meetings.

DO NOT exchange commercially sensitive information.

DO NOT engage in any conduct, which could be construed as designed to exclude competitors from the market or to create a barrier to entry onto the market.

DO NOT meet without PDA Europe counsel present or without the prior approval of PDA Europe counsel.
1. Benefit from key information and business developments affecting the polyurea industry on European and international level.

2. Shape the future of the polyurea industry in Europe.

3. Jointly pursue and promote the interests of the industry in front of relevant European organisations and institutions.

4. Be part of the development and sharing of best practices.

5. Benefit from “members only” discounts on technical information, training courses and the annual conference.

6. Increase your company’s visibility by participating, speaking and exhibiting at the annual conferences.

7. Actively contribute to the PDA Europe committees meetings and activities.

8. Increase market perception and acceptance of the polyurea technology.

9. Network with European and international industry representatives.

10. Have a global perspective on the polyurea industry through continuous links with the United States (PDA) and other regions of the world.
Envision a durable, waterproof coating that can be applied to a membrane

Bayer did. It’s the Proven Power of Polyurethane Coatings Built on Bayer Technology

Personnel at the Atlanta Braves Spring Training Facility at Wide World of Sports Disney in Orlando, Florida realized that a membrane between the 125,000-square-foot stadium’s structural concrete slab and the topping slab had failed in spots. As a result, water had seeped through cracks in the concrete and started to damage the superstructure. They needed an expert team to develop a winning game plan. Our vision for a waterproof polyurea topcoat built on polyaspartic resin technology from Bayer MaterialScience was a home run. The polyaspartic color topcoat was applied to a new external membrane installed above the concrete topping. Once applied, it provided a high film build to develop the waterproof coating needed to protect the stadium’s structural concrete from further water damage. It’s exceptionally durable, protecting the external membrane from wear or damage due to heavy cart and foot traffic from thousands of fans. Initial performance tests conducted during the first hour-and-a-half years of service have indicated that the polyaspartic color coat will outperform traditional polyurethane coats. It will retain its sheen much longer and will be easier to clean. Plus despite a late start, the coating was applied quickly and dried fast... just in time for the year’s professional and little league baseball games. That’s the power of polyurethane coatings built on Bayer technology. Want to find out more? Contact us at CSC@bayermaterialscience.com

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