



# Plastic Pipes XVI



XVI International  
Plastic Pipes Conference  
Barcelona, Spain

**September 24–26, 2012**

BARCELONA  
2012

ORGANISED BY



# Plastic Pipes XVI

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## Organised by Plastic Pipes Conference Association



This Conference will build on the success of previous Conferences, including Plastic Pipes XV, which attracted over 400 delegates to Vancouver, Canada. It has become fully International, with delegates from over 20 countries, including over 200 delegates from outside Europe. Therefore Plastic Pipes XVI is the event to present your information and ideas on plastic pipe products. End-users, designers, engineers, manufacturers and contractors will be among the attendees. The PPCA is dedicated to providing a platform for the distribution and discussion of technical, scientific and market information to support the world-wide use of plastic pipeline systems.

### Plastic Pipes in a unique event

- To share the newest developments
- For exchange of technology between major suppliers, producers and end-users
- To make possible impacts on plastics industry
- To find out innovative pipe system solutions for a more sustainable world
- To make new business relationships during the attractive social programs

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China Plastics Piping Association

**Alan Whittle**  
Consultant – Iplex Pipelines

# Monday, September 24, 2012

<b>Session 1</b>	<b>CONFERENCE OPENING</b>	<b>ROOM A</b>		
10:20–10:30	<b>Opening Presentations</b> <i>DAVIDOVSKI, Zoran</i>			
10:30–10:50	<b>Contribution of the Plastic Pipes industry to the PVC voluntary commitment</b> <i>Hans Telgen</i>			
<b>10:50–11:10</b>	<b>The CO2 impact of plastic piping systems</b> <i>DAVIDOVSKI, Zoran</i>			
11:10–11:30	<b>Specialized training on plastics pipes installation. AseTUB professional installer card contributes to quality</b> <i>DE LA CRUZ, Monica</i>			
11:30–11:50	<b>Collaborative processes across the Australian urban water industry to support asset management of network infrastructure using plastic pipe products</b> <i>RADFORD, Carl</i>			
11:50–12:10	<b>Addressing India's food needs with modern PE micro-irrigation systems</b> <i>DASGUPTA, Chanchal</i>			
12:10–12:30	<b>Polyethylene Pipe and Hydroelectric Development</b> <i>SANDSTRUM, Steve</i>			
<b>12:30–13:50</b>	<b>Lunch</b>			
<b>Session 2A</b>	<b>CASE STUDIES PART I</b>	<b>ROOM A</b>	<b>Session 2B</b>	<b>FRACTURE MECHANICS</b>
	<b>Chair: HIROYUKI, Nishimura</b>			<b>Chair: BOROS, Stephen</b>
13:50–14:10	<b>Industrial Application of PE pipes and Production Quality Control Procedures</b> <i>WANG, Zhiwei</i>		13:50–14:10	<b>Evaluation of long-term-properties of polyolefin multi-layer-pipes using linear elastic fracture mechanics</b> <i>ARBEITER, Florian</i>
14:10–14:30	<b>CPVC in Fire Sprinkler Systems</b> <i>FREIDHOF, Sinikka</i>		14:10–14:30	<b>A reliable point loading test method for HDPE pipe materials</b> <i>XIONG, Zhimin</i>
14:30–14:50	<b>PE Pipes in the Oil and Gas Industry in the Middle East</b> <i>ADHYATMAGBATTAR, Mohana Murali</i>		14:30–14:50	<b>Ligament Stress Regression of Notched PE100/PE4710 Pipe</b> <i>Z. JIMMY, Zhou</i>
14:50–15:10	<b>From double loop to double loop: PE100-RC, the perfect fit for geothermal probes</b> <i>LIBERT, Daniel</i>		14:50–15:10	<b>Accelerated Material Ranking with Cyclic CRB Tests</b> <i>FRANK, Andreas</i>
15:10–15:30	<b>PE100 Pipeline Systems in the Coal Seam Gas Industry</b> <i>HEATHCOTE, Mark</i>		15:10–15:30	<b>Strain hardening modulus: an accurate measure for slow crack growth behavior of HDPE pipe materials</b> <i>HAVERMANS, Linda</i>
15:30–15:50	<b>PVC-O pipes for water and waste water applications: Standardisation, Quality and Applications</b> <i>ALFERINK, Frans</i>		15:30–15:50	<b>A Methodology to Predict Critical Flaw Size in HDPE Piping and Joints in Nuclear Safety-Related Applications</b> <i>KRISHNASWAMY, Prabhat</i>
15:50–16:10	<b>Success of plastic piping systems in the water treatment industry</b> <i>BARBONE, Riccardo</i>		15:50–16:10	<b>Stress analysis of elbows and tees of plastic pipes using finite element analysis</b> <i>SEIBI, Abdennour</i>
<b>16:10–16:40</b>	<b>Coffee Break</b>		<b>16:10–16:40</b>	<b>Coffee Break</b>
<b>Session 3A</b>	<b>NEW MATERIALS AND APPLICATIONS PART I</b>	<b>ROOM A</b>	<b>Session 3B</b>	<b>INSTALLATION PRACTISES</b>
	<b>Chair: ULRICH, Schulte</b>			<b>Chair: BELLOIR, Pierre</b>
<b>16:30–16:50</b>	<b>Challenging installation of large diameter HDPE pipe by directional drilling provides a comprehensive water management solution and an improved environmental outcome</b> <i>MICIC, Predrag</i>		16:30–16:50	<b>Plastic pipework for gas in buildings and the consequences of fire</b> <i>RIJPKEMA, Hella</i>
16:50–17:10	<b>Bimodal polyethylene for pipe applications obtained by chromium oxide/metallocene binary catalysts</b> <i>MORENO, Jovita</i>		16:50–17:10	<b>Innovative Pipe Coiling Process Potentially Minimises Field Welding of DN150 HDPE Gas Pipelines</b> <i>CONNOLLY, Rodger</i>
17:10–17:30	<b>Estimation concerning damage tolerance of several plastic pipes by third party</b> <i>HIGUCHI, Yuji</i>		17:10–17:30	<b>A study of electro-foaming fusion wrap fitting for Polyethylene sewer pipe</b> <i>KYE, Hyoungsan</i>
17:30–17:50	<b>Molecular and morphological parameters governing yield failure of PE pipe materials</b> <i>HARTL, Anna Maria</i>		17:30–17:50	<b>Effect of Environmental Temperatures on PE Water Pipe Application</b> <i>ZHANG, Zhihao</i>
17:50–18:10	<b>Recent advances in PE-RT developments: unleashing of the potential of metallocene technology for pressure pipes</b> <i>CORNETTE, Martine</i>		17:50–18:10	<b>PP-MD pushfit silent piping system reinforces with nano Filler</b> <i>SAHAF AMIN, Alireza</i>
18:10–18:30	<b>Resistance of PE4710 Piping Materials to Pressure Surge Events in Force Main Applications</b> <i>CRABTREE, Allison</i>		18:10–18:30	<b>Redefining Pipe Installations</b> <i>WALLACE, Iain</i>
18:30–18:50	<b>Investigations on drinking water in contact with PE-RT materials</b> <i>BASTERO, Amaia</i>		18:30–18:50	<b>The Automatic SPR, New trenchless pipeline renewal method</b> <i>YAMAJI, Tomoroni</i>

**19:30 Welcome Reception at Hotel Arts**

## Tuesday, September 25, 2012

<p><b>Session 4A</b>    <b>STRUCTURED WALL PIPES</b>    <b>ROOM A</b></p> <p>Chair: SANDSTRUM, Steve</p> <p>8:30–8:50    The Evolution of HDPE in Corrugated Pipe <i>PLUMIER, Michael</i></p> <p>8:50–9:10    Large Diameter PE Pipes for CSO's <i>GROEN, Gerry</i></p> <p>9:10–9:30    Replacement Test for Current Buckling and Ring Flexibility Tests <i>KURDZIEL, John</i></p> <p>9:30–9:50    Stiff, Stiffer, PP3000 MPa – an impressive journey through 30 years of PP development for underground sewage applications <i>LACKNER, Martin</i></p> <p>9:50–10:10    Butt Fusion Welding of Large Diameter Spiral Wound PP-HM Pipes <i>HEDESIU, Cristian</i></p> <p><b>10:10–10:30 Coffee Break</b></p>	<p><b>Session 4B</b>    <b>ENVIRONMENT &amp; SUSTAINABILITY</b>    <b>ROOM B</b></p> <p>Chair: BREINER, Tom</p> <p>8:30–8:50    A Comparison and Analysis of the Environmental Impacts of Large Diameter Concrete and HDPE pipes <i>COWLE, Matthew</i></p> <p><b>8:50–9:10</b>    <b>Best Environmental Practice PVC pipes and fittings for the Green Building Industry</b> <i>MACOVEZ, George</i></p> <p>9:10–9:30    How much recycled PVC in PVC pipes? <i>FUMIRE, Joel/TAN, Steve</i></p> <p>9:30–9:50    Do voluntary Quality Marks have a future next to the CE-marking? <i>MEERMANN, Henk</i></p> <p>9:50–10:10    High performing PO materials for demanding applications like solar absorbers and district heating <i>STUBENRAUCH, Kurt</i></p> <p><b>10:10–10:30 Coffee Break</b></p>
<p><b>Session 5</b>    <b>Session 5A: TESTING &amp; MODELING</b>    <b>ROOM A</b></p> <p>Chair: SUMWUONG Choi</p> <p>10:30–10:50    Applicability and Limitations for Further Acceleration of Classification and Certification Testing of PE-HD Materials for Pressurized Pipes <i>LANG, Reinhold</i></p> <p>10:50–11:10    Comparison of accelerated tests for PE grades lifetime assessment <i>PINTER, Gerald</i></p> <p>11:10–11:30    Pipe Accelerated Notch Test (PANT) applicable to PE100 RC-pipes (and others) <i>VANSPEYBROECK, Philippe</i></p> <p>11:30–11:50    A new approach for a fast and relevant evaluation of environmental stress-crack resistance in polyethylene grades <i>LHOST, Olivier</i></p> <p>11:50–12:10    Analysis of slow crack initiation of old polyethylene resins by means of an elasto-visco-plastic rheological model: experimental and numerical approach <i>BOUJLAL, Adil</i></p> <p>12:10–12:30    Predicting slow crack growth resistance in polyethylene resins using a single, primary structural parameter (PSP2) <i>DESLAURIERS, Paul</i></p> <p><b>12:30–13:50 Lunch</b></p>	<p><b>Session 5B</b>    <b>COMPOSITE PIPES</b>    <b>ROOM B</b></p> <p>Chair: PLUMIER, Michael</p> <p>10:30–10:50    Largest PE pipe project in North Africa for phosphates transportation <i>SALLES, Christophe</i></p> <p>10:50–11:10    An Enhanced Reinforced Thermoplastic Pipe (RTP) for High Temperature Applications in the Upstream Oil &amp; Gas Industry <i>MORLAND, Kallum</i></p> <p>11:10–11:30    The Pipe Made of Braided FRTP Prepreg Materials <i>SHIMODA, Atsushi</i></p> <p>11:30–11:50    Custom made plastic pipes and fittings produced from polyethylene monocopposite open new applications <i>SPAETH, Thorsten</i></p> <p>11:50–12:10    The Design Calculation and Test of Dongdao Drainage Pipe Project in Yongyang, Wuqing District, Tianjin <i>LI, Hongshan</i></p> <p>12:10–12:30    New High Performance Tie-Layer Adhesives Selected for Multilayer Pipe Applications <i>BOTROS, Maged</i></p> <p><b>12:30–13:50 Lunch</b></p>
<p><b>Session 6A</b>    <b>JOINING PRACTISES</b>    <b>ROOM A</b></p> <p>Chair: LEVER, Ernest</p> <p>13:50–14:10    Harmonisation of Polyethylene Pipe Buttfusion Procedures and Test Methods – Final Conclusions <i>BEECH, Stephen</i></p> <p>14:10–14:30    Jointing of large bore PE pipes: "Think big"... and even bigger. <i>ECKERT, Robert</i></p> <p>14:30–14:50    The functioning of flange joints – Findings from full scale experiments and FEM analysis <i>JACOBSSON, Lars</i></p> <p>14:50–15:10    Butt Fusion Cooling Times, Speeding Up the Process – Effect of Ambient Temperatures <i>STRIPLIN, Ted</i></p> <p>15:10–15:30    Enhancing butt fusion joints integrity against slow crack growth <i>OH, Juseok</i></p> <p><b>15:30–15:50 Coffee Break</b></p>	<p><b>Session 6B</b>    <b>PVC : PRODUCTION, TESTING &amp; INSTALLATION</b>    <b>ROOM B</b></p> <p>Chair: FUMIRE, Joel</p> <p>13:50–14:10    New developments in PVC-O: widening the market possibilities <i>MUNOZ, Ignacio</i></p> <p>14:10–14:30    The Technical Progress of PVC-U Pipe <i>WANG, Zhanjie</i></p> <p>14:30–14:50    Tensile-Impact Experiments of PVC-U at a Wide Range of Temperatures <i>VAN DER STOK, Ernst</i></p> <p>14:50–15:10    Non-destructive and In-situ Determination of Gelation Level of Buried PVC Pipes <i>DRENTH, Emiel</i></p> <p>15:10–15:30    Training Toolkit for Training the Sales Forces of PVC Pipe Manufacturers <i>GREINER, Jean-Francois</i></p> <p><b>15:30–15:50 Coffee Break</b></p>
<p><b>Session 7A</b>    <b>RESISTANCE TO DISINFECTANTS</b>    <b>ROOM A</b></p> <p>Chair: SALLES, Christophe</p> <p>15:50–16:10    Performances of Multilayer PE100 pipes upon ageing to chlorine dioxide disinfectants <i>Hill, David/CARMIER, Jean</i></p> <p>16:10–16:30    Polyethylene Pipes: PE water pipes and chlorinated disinfectants <i>COSTA, Francis Reny</i></p> <p>16:30–16:50    A solution for drinking water networks: emerging new generation of PE100 pipes with higher chlorine resistance <i>ROZENTAL, Magali/GUEUGNAUT, Dominique</i></p> <p>16:50–17:10    Accelerated Investigation of the Effect of Chlorine Dioxide on the Long-Term Failure Behavior and the Material Aging of PE-RT <i>REDHEAD, Anita</i></p> <p>17:10–17:30    Investigation and comparison of accelerated pipe testing data with true pipe installations in contact with chlorine dioxide as disinfectant <i>HASSINEN, Jarno/JACOBSON, Karin</i></p> <p>17:30–17:50    Development of an enhanced chlorine resistant antioxidant package for potential use in polyethylene using a rapid LC-MS technique <i>JOSEPH, Sebastian</i></p> <p>17:50–18:10    The estimation of surface void initiation of polyethylene pipes immersed in chlorinated water <i>KURIYAMA, Takashi</i></p>	<p><b>Session 7B</b>    <b>CASE STUDIES PART II</b>    <b>ROOM B</b></p> <p>Chair: PALERMO, Gene</p> <p>15:50–16:10    US Case Studies in HDPE 4710 Potable Water Distribution Systems <i>SCOBY, Greg</i></p> <p>16:10–16:30    Bimodal PE Pipe Proves an Enduring Solution for Gas Pipe In New Mexico <i>SERRANO DE RIVERA, Angela</i></p> <p>16:30–16:50    Case Study: First ever extensive commercial use of Polyamide 11 (PA-11) based piping systems in natural gas distribution, at 14 bars (200 psi) <i>SHAH, Patrick</i></p> <p>16:50–17:10    Using PVC-pipes to put microalgae in the right light <i>SCHUESSLER, Stephan</i></p> <p>17:10–17:30    Performance and sustainability advantages of PVC sewer pipes in Australia <i>WHITTLE, Alan</i></p> <p>17:30–17:50    Securing the durability of the gas distribution network of the earthquake -sensitive area of t'Aquila (Italy) with PE100-RC <i>CORNATI, Alessandro</i></p> <p>17:50–18:10    The Application and Promotion of Plastic Inspection Chambers for Drainage System in China <i>ZHOU, Minhong</i></p>

**19:00 Transfer to the Gala Dinner to Codorniu Wine Cellars**

## Wednesday, September 26, 2012

<p><b>Session 8A</b>    <b>TEST METHODS</b>    <b>ROOM A</b></p> <p>Chair: <i>BELFORTE, Antonio</i></p> <p>8:30-8:50    Identification of the PE resins of the distribution networks by means of the DSC-SIS technique applied on micro-sampling <i>GUEUGNAUT, Dominique</i></p> <p>8:50-9:10    Determination of the appropriate accelerating test method and the evaluating index for the outside hot water piping made of poly-propylene <i>SHIMURA, Toshiki</i></p> <p>9:10-9:30    Fast small scale method to predict materials resistance to rapid crack propagation <i>PIEL, Tanja</i></p> <p>9:30-9:50    Strain Hardening Tests on PE Pipe Materials <i>SCHOLTEN, Frans</i></p> <p>9:50-10:10    Suitability of Non Destructive Techniques for Polyethylene Pipe Joints <i>HERMKENS, René</i></p> <p>10:10-10:30    Inspection results of damaged polyethylene electrofusion joints using ultrasonic imaging method <i>SEONG HEE, Kil</i></p> <p><b>10:30-10:50</b>    <b>Coffee Break</b></p>	<p><b>Session 8B</b>    <b>NEW MATERIALS AND APPLICATIONS PART II</b>    <b>ROOM B</b></p> <p>Chair: <i>LIVELY, Karen</i></p> <p>8:30-8:50    Introducing PP-HM Materials for Twin Wall Corrugated Pipes in China <i>FANG, Dongyu</i></p> <p>8:50-9:10    Polybutene-1 (PB-1) Grades Used for Hot &amp; Cold Water Pipe Applications <i>KOENNECKE, Klaus</i></p> <p>9:10-9:30    Increasing energy efficiency of pipe extrusion processes through advanced polymer design <i>HANDSTANGER, Ralph</i></p> <p>9:30-9:50    Polypropylene for structured sewage pipes. Comparative study of materials in use through computer simulation of radial compression <i>TISI, Francesca</i></p> <p>9:50-10:10    Innovative Approaches to Assuring Quality Pipe Compounds <i>JEE, White</i></p> <p>10:10-10:30    New generation of flexible preinsulated plastic heat pipes <i>OSTROVSKY, Dmitry</i></p> <p><b>10:30-10:50</b>    <b>Coffee Break</b></p>
<p><b>Session 9A</b>    <b>NETWORK MANAGEMENT</b>    <b>ROOM A</b></p> <p>Chair: <i>FAVROT, Pierre</i></p> <p><b>10:50-11:10</b>    <b>An Assessment of the Competitiveness of PVC Piping Systems - The Total Cost of Ownership Approach</b> <i>MARANGONI, Alessandro</i></p> <p>11:10-11:30    Water Main Break Rates in the U.S.A. &amp; Canada 2010 <i>FOLKMAN, Steven</i></p> <p>11:30-11:50    Storm weather management: infiltration crates, a sustainable and long term solution <i>SIGWALD, Armelle</i></p> <p><b>11:50-12:10</b>    <b>The Water for The World™ initiative: Reflection on 5 years of experience</b> <i>TOOGOOD, Jane</i></p> <p>12:10-12:30    Cooking on gas, or how future energy sources will shape the pipe industry <i>HAUBRUGE, Hugues</i></p> <p>12:30-12:50    Evaluation of long-term performance on PEX and Multilayer Pipes for Hot Water Supply <i>NISHIMURA, Hiroyuki</i></p> <p>12:50-13:10    High Temperatures on PE Pipes for Water Supply Pressure Verification <i>CHEN, Zenggui</i></p>	<p><b>Session 9B</b>    <b>PVCs</b>    <b>ROOM B</b></p> <p>Chair: <i>TIMAR, Eva</i></p> <p>10:50-11:10    How CPVC Entered Various Applications in Industrial &amp; Large Building Projects In India <i>DHAR, Manoj</i></p> <p>11:10-11:30    The long term durability of PVC rainwater systems - performance after 25 years of service <i>STEVE, Tan</i></p> <p>11:30-11:50    PVC-O pipes for big pressure nets: DN500 &amp; DN 630 <i>ARENA, Antonio</i></p> <p>11:50-12:10    Choosing the right molecular weight for oriented PVC pipes <i>FUMIRE, Joel</i></p> <p>12:10-12:30    A study assessing the performance of O-PVC in pressure pipes <i>MICHEL, Catherine</i></p> <p>12:30-12:50    Global PVC Stabiliser Trends for Pipes and Injection Moulded Fittings - Challenges and Practical Experience <i>ANDERS, Udo</i></p> <p>12:50-13:10    New technology on OPVC <i>SPEKREIJSE, Rob</i></p>
<p><b>5 MINUTES POSTER SESSION</b></p> <p>13:10-13:30    Evaluation of Material Safety for Plastic Pipe in North America - Impacts of NSF/ANSI Standard 61 <i>KASHEFI, Nasrin</i></p> <p>Water Loss Management in the US <i>RUBIEZ, Camille-George</i></p> <p>Are methods for tightness testing fit for purpose? <i>JACOBSSON, Lars</i></p> <p>Crack intersection modelling in plastic pipes: simulation of cavitation erosion damage <i>FAIRFIELD, Charles</i></p> <p>13:30-13:50    Approach to the solution for removing "sharkskin" of PE pipe through extruder die modification <i>CHI, Yongsheng</i></p> <p>Production Technology of Large Caliber Spiral Profiled Wall Polyethylene Pipe <i>SHI, Jingdong</i></p> <p>Effect of antioxidants of polyethylene of raised temperature resistance (PE-RT) pipes for a long lifetime for hot water supply and for space heating <i>NISHIMURA, Hiroyuki</i></p> <p>Development of an automated phased array ultrasonic inspection system and flaw acceptance criteria for welded joints in polyethylene pipes <i>T ROUGHTON, Mike</i></p> <p>13:50-14:05    A novel technology for foam core pipe production for sewage application <i>SCHLUMMER, Christian</i></p> <p>Determination of the long term welding properties for PE-RT in pipe applications <i>BASTERO, Amaia</i></p> <p>Innovation in Pipe seals <i>SMUDDE, Jos</i></p> <p>14:05-14:10    Conference Closing <i>DAVIDOVSKI, Zoran</i></p> <p><b>14:10-15:40</b>    <b>Lunch</b></p>	



- **Comparison of ASTM and ISO Requirements for PE-RT in Potable Water Applications**  
*BAKER, Carl*
- **Modeling and optimization of the electrofusion process of polyethylene fittings**  
*BOUJLAL, Adil*
- **The Evolution and Application of Large Diameter Steel Reinforced Plastic Pipes for Sewerage Engineering in China**  
*CHEN, Que*
- **Low energy demand extrusion of exceedingly large diameter pipes at supreme output rates**  
*DOBROWSKY, Josef*
- **Pipelines safety improvement through controlling rodents**  
*ETEMAD, Nahid*
- **The capability of ultrasonic phased array technique for detecting and measuring defects at the inner surface of a polyethylene pipe through an outside analysis**  
*GUEUGNAUT, Dominique*
- **Inline cutting machine and method for short-length PP and PVC-U indoor sewage pipes**  
*GULMINELLI, Marco*
- **Innovations in the thermoforming process for sockets at the end of HDPE, PP structured wall pipes for underground sewage**  
*GULMINELLI, Marco*
- **Influence of Residual Stresses on Lifetime Prediction for Plastic Pipes**  
*HEINEMANN, Jürgen*
- **Effect of the residual stresses on the slow crack growth**  
*HUTAR, Pavel*
- **The Impact of Material Components in Irrigation Pipe Applications**  
*JEE, White*
- **Protective Sheeting for Polyethylene Pipe**  
*MINODA, Takeshi*
- **The importance of understanding different environmental claims validation certifications for plastic piping system-technical & marketing perspective**  
*POLLETT, Haemi*
- **What is the risk of plastic pipe long-term degradation on water quality?**  
*RABAUD, Benjamin*
- **Analysis of the Process Zone and the Mechanism of Slow Crack Growth Initiation in High Density Polyethylene with Accelerated Cyclic Tests**  
*REDHEAD, Anita*
- **Review of 12 Years of Performance Data and Observations of Deeply Buried Thermoplastic Pipe in Ohio**  
*SARGAND, Shad*
- **Potential of PE-HD in oilfield pipe applications**  
*SCHOEFFL, Paul*
- **PP-RCT – Five years on the market, five years of experience - an update and summary of the latest and further developments of a high quality PPR system**  
*SCHOENBACH, Peter*
- **The Research of New PP-R Welding Pipe Fittings**  
*SHENG, Zhong-yi*
- **Formation of biofilm in tap water supply networks**  
*BIEDRON, Izabella*
- **An Update of the Progress of the China Plastic Pipe Industry**  
*WANG, Zhanjie*
- **The Introduction of High Stress Crack Resistant PE100 and its use in several demanding projects in Asia and the Middle East**  
*WEDGNER, Andrew*
- **Innovative method for accelerated testing of thermo-oxidative lifetime of PE pipes**  
*WÜST, Jürgen*
- **High Thermal Conductivity Polyethylene Pipe**  
*XIA, Chengwen*
- **The Application of Non-metallic Piping Technology in the Daqing Oil Field**  
*ZHANG, Li*
- **Simultaneous Butt Fusion in Dissimilar Materials in Double Walled Thermoplastic Piping Systems**  
*ZIU, Christopher*
- **Changes of the plastics pipe market**  
*BÜDY, László*
- **Different methodologies to characterize the slow crack growth resistance of polyethylene pipe grades**  
*RODRIGUEZ, Jesús*
- **Understanding mechanics of crack -arrestors for RCP prevention**  
*PARK Jaeheum*
- **Heavy Metal Free Yellow Colorant for PE Gas Distribution Pipe**  
*REINICKER, Roger*
- **Designing against RCP using crack-arrest toughness**  
*CHOI, Sunwoong*

# General Informations

## Venue

### Hotel Arts Barcelona

#### Marina 19-21, Barcelona – Spain

This spectacular hotel is located in the beautiful of Olympic port of Barcelona. Hotel Arts Barcelona is an exceptional venue for corporate events and conferences. Hotel Arts Barcelona is an exceptional venue for corporate events and conferences. An ideal meeting point with a high quality service and a team of experienced professionals to make each event a resounding success.



## Registration

	Standard Registration fee after 1 <sup>st</sup> May 2012
Registration fee for participants	EUR 1.180.-
Registration fee for accompanying person	EUR 350.-

### The registration fee includes:

- participation in the scientific programme
- one copy of the final programme
- participation in the Welcome Reception
- attendance at the Gala Dinner
- conference bag

### Accompanying Person fee includes:

- participation in Welcome Reception
- attendance at the Gala Dinner

### How to register – You can register online:

[http://www.ppxvi.org/online\\_registration.php](http://www.ppxvi.org/online_registration.php)

Or off-line with sending us the filled in downloadable registration form

## Social Programs

### INCLUSIVE for registered participants and accompanying persons

Welcome reception – 24th September 2012	Gala Dinner – 25th September 2012
Welcome Reception will be held at the Hotel Arts.	The Gala dinner at Codorniu Wine Cellars will be a unique experience for all participants. Transport will be provided to the venue and back.

## Accommodation

Block reservations for Plastic pipes 2012 participants and accompanying guests have been made at Hotel Arts at special rates. Please, note that the number of rooms are limited, so reserve your room at your earliest convenience. We can guarantee the rooms only till 31 August 2012.

All participants of PPXVI can make reservation on-line directly on the website of the hotel with using the Plastic Pipes group code: KJ6KJ6A

For further information, please check:

<http://www.ppxvi.org/accommodation.php>

## Exhibition

A technical exhibition will accompany the Conference, which will feature important aspects of the plastic pipes business and show some of the new developments in product design, manufacture, maintenance, evaluation and testing procedures. Please visit the website and you can reserve your booth online from the exhibition map.

[http://www.ppxvi.org/exhibitor\\_registration.php](http://www.ppxvi.org/exhibitor_registration.php)

Exhibition fee after 1st May, EUR 5 000 /9 sq

### The fee includes the followings:

3x3 m<sup>2</sup> booth from syma elements, 1 exhibition table, 1 table + 2 chairs, 3 spot lamps, electric connection with 1 plug, 220V, The Conference registration fee for 1 participant is included.

## Optional programs

Half-day and full day sightseeings and excursion around Barcelona and also interesting wine and gastronomic tours will be organised beside the scientific programmes. Advance registration is necessary. The tours will start only in case of enough participants.



## Contact – Further information

### Local Secretariat – Congress Ltd.

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