



Plastics Technologies

Programme

International Conference

16<sup>th</sup> - 17<sup>th</sup> May 2006

Maastricht, Netherlands

# Particle Foam 2006



Simultaneous  
Translation!

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Eumeps Packaging  
European Manufacturers of EPS

## Foreword

A world without plastics is inconceivable today and thanks to their properties plastics have also been accepted by the general public. Even with particle foams, recent opinion surveys have shown that the majority of consumers is aware of the positive properties of the materials on which this two-day conference will be focussing.

Thanks are due for this to the outstanding job done by the national organizations in which the interests of individual processors in this branch of industry are represented. Particular emphasis should therefore be given to the fact this is now the second time this conference has been successfully staged in collaboration with EUMEPS, the European confederation of manufactures of expanded polystyrene. Covering the interests of individual processors, feedstock developments, new applications for particle foams and solutions in machine design, our programme this year offers an extremely interesting mixture of topics. The solutions described are guarantees of the products presented having a high level of cost-efficiency. They bear witness to a partnerlike collaboration between the above-mentioned market participants. The large number of these is a clear indication that Europe, where particle foam processing first started, is also the right place for an international conference for this branch of industry.

On behalf of the Programme Committee  
**Walter Kurtz**, Cert. Eng., Kurtz Holding GmbH & Co.,  
Kreuzwertheim

## Programme committee

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**Haimo Emminger**, Industrieverband Kunststoffverpackungen e.V., Bad Homburg

**Frederic Falisse**, XPACK S.A., Ensival, Belgium

**Volker Hammes**, Cert. Eng., BASF AG, Ludwigshafen

**Joachim Kempe**, Cert. Eng., Philippine GmbH & Co. Technische Kunststoffe KG, Lahnstein

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## Technical sponsors

VDI Society for Plastic Technologies

## Organizer

VDI Wissensforum IWB GmbH  
in collaboration with EUMEPS

## Conference chairman

**Walter Kurtz**, Cert. Eng., Kurtz Holding GmbH & Co., Kreuzwertheim

## Mainsponsor

The conference is being held with the friendly support of:



Kurtz Holding GmbH & Co., Kreuzwertheim  
[www.kurtz.de](http://www.kurtz.de)

## Tuesday, 16<sup>th</sup> May 2006

### 09:00 Welcoming address and introduction

**Walter Kurtz**, Cert. Eng., Kurtz Holding GmbH & Co,  
Kreuzwertheim

**Frederic Falisse**, President, EUMEPS Packaging,  
Ensival, Belgium

### Market and trends for EPS and EPP

### 09:15 A review of recycling and national marketing activities in the European EPS packaging industry

**Damien Packer**, British Plastics Federation, London, UK  
European EPS recycling rates – types of recycling – recycling initiatives – national marketing and PR activities to promote EPS packaging

### 09:35 EPS recycling collaborative partnerships

**Betsy Steiner**, Alliance of Foam Packaging Recyclers (AFPR), Crofton, Maryland, USA  
EPS recycling partnering advancements to enhance economic viability

### 09:55 Report on the Chinese EPS industry

**Shuting Hou**, EPS Committee, China Plastics Processing Industry Association, Shanghai, China  
EPS market report: 2005 EPS resin output – EPS produce application (wall body application, packaging, municipal project) – EPS section distributing – environmental and recycling – the development foreground of EPS – CPPIA- EPS work outline – world EPS website – EPS graduate school – EPS college – world EPS conference

### 10:10 EPS 2006: markets, prices and trends

**Dr. Stefan Dreher**, BASF AG, Ludwigshafen  
EPS markets in Europe and the rest of the world (countries, applications) – growth drivers and market perspectives – EnEv and energy passport influences on the German EPS market – EPS range and capacities – influences on price developments in EPS feedstocks

## Tuesday, 16<sup>th</sup> May 2006

### 10:45 EPP market development with focus on non-automotive applications

**Egon Meier**, Cert. Eng., BASF AG, Ludwigshafen  
 EPP–European/world market volume subdivided into automotive and non-automotive applications (packaging, engineering parts) – developments in the past with examples (E-pack, food containers with cooling or heating elements, heat-exchanger system) – current developments: artificial lawns, sports and playing surfaces with EPP cushioning layer - ground covers in ice rinks – trends in EPP: gaming pieces and furniture components – enclosure cladding

### 11:20 Coffee break

### Machine technology

### 12:00 Process development and its effects on the energy balance since introduction of vacuum technology in EPS processing

**Brahim Lemjimer**, Cert. Eng., Winfried Fuhr, Erlenbach GmbH, Lautert

Reasons for using vacuum in the foaming process – explanation of different vacuum systems – advantages and disadvantages – effects on the foaming process – energy savings – effects on cycle time – effects on quality – costs – possible applications for vacuum systems

### 12:30 Open- and closed-loop control of particle-foam processing machines

**Klaus Baumann**, Kurtz GmbH, Kreuzwertheim  
 State of the art machine controllers satisfy requirements for visual presentation of information. They make for a better overview, organize the wide variety of operations control possibilities, thus supporting simple, safe handling of processing machines. Assistance systems guide the operator by means of a structured problem-solving algorithm which can detect and correct errors when tools are being run in. Further improved closed-loop control makes possible safe control of moulding processes and thus exploits optimization reserves.

## Tuesday, 16<sup>th</sup> May 2006

### 13:00 Use of energy-absorbent foams in vehicle construction

**Bernhard Lemler**, Cert. Eng., Patrik Brings, Cert. Eng., Philippine GmbH & Co. Technische Kunststoffe KG, Lahnstein

Use of energy-absorbent foams – properties of EPP/PUR – manufacture of energy-absorbent PUR/EPP mouldings – cost comparison of EPP/PUR mouldings – recyclability of EPP/PUR – summary

### 13:30 Lunch break

### 15:00 Moulding production and economic success

**Dr. Rolf Hallstein**, Kurtz GmbH, Kreuzwertheim

Distribution and origins of costs – comparison of different processing methods – energy consumption – productivity – cost-benefits analysis

### 15:30 Energy-saving EPS processing

**Dr. Klaus Unterleutner**, Cert. Eng., Hirsch Maschinenbau GmbH, Glanegg, Austria

Holistic consideration of EPS processing – examination of processes from prefoaming to finished products – key figures from production facilities (fuel, power consumption) – organisational and technical possibilities and energy-saving measures

### 16:00 Pentane disposal in EPS foam production facilities

**Otto Plettner**, Cert. Eng., Epsilon Holdings, Glendora, California, USA

History and background – previous development – contribution of EPS pentane emissions to total VOC emissions – pentane as blowing agent for EPS – physical and chemical properties of pentane – emission points in EPS processing – methods of pentane disposal – the ‘Epsilon System’ – testing pentane disposal installations – recommendations for the EPS-processing industry

### 16:30 Coffee break

# Tuesday, 16<sup>th</sup> May 2006

## EPS - material and processes

- 17:00 Latest technology in EPS pre-expansion  
**Franco Cocci**, Nuova IDROPRESS S.p.A., Canossa, Italien
- 17:35 Examination of levels of fusing in EPS particle foam mouldings on the basis of different physical measuring methods - correlation with manufacturing conditions and application-related properties  
**Dr. Rolf-Dieter Klodd**, The Dow Chemical Company, Bad-Lauchstädt, Dr. Friedhelm Bunge, Dow Deutschland GmbH, Rheinmünster  
EPS particle foam - mouldings - measurements of fusing levels - comparison of methods - correlation with application-related properties (strength, water absorption capability) - drop impact testing
- 18:10 End of presentation of papers

## Evening event

- 19:00 Meeting point and departure from:  
in front of Best Western Grand Hotel de l'Empereur  
Bus transfer to restaurant 'La Caverne de Geulhem' and return to Best Western Grand Hotel de l'Empereur
- 19:30 VDI evening reception with buffet in the restaurant 'La Caverne de Geulhem'  
Wolfsdriesweg 8a, 6325 PM Berg en Terblijt (Maastricht)  
[www.caverne.nl](http://www.caverne.nl)



## Wednesday, 17<sup>th</sup> May 2006

### 09:00 Welcoming address and introduction

**Walter Kurtz**, Cert. Eng., Kurtz Holding GmbH & Co,  
Kreuzwertheim

### EPP: applications and potential

### 09:05 Particle foam: problem-solver for small production runs?

**Marion Rauscher**, Cert. Eng., BMW M, Garching-Hochbrück

Requirements made of automotive parts – opportunities in small production runs of vehicles – outlook: what could be further optimized?

### 09:40 ARPRO® EPP lightbuilt automotive seating

**Heiko Hummel**, Cert. Eng., JSP International,  
Obersulm-Eschenau

Requirements in automotive seating (safety, comfort and styling) – solutions in ARPRO® EPP in comparison with current solutions – functionality of the concept – potential applications – outlook

### 10:00 Case study of project management in connection with a new product and machine development: manufacture of car seat-back cores made of EPP with inserts in large-scale production on an EPP shuttle machine 170/150 with alternating tool (parallel foaming and parts handling)

**Georg Schloms**, Teubert Maschinenbau GmbH, Blumberg  
Customer inquiry and problem definition – preliminary concept preparation by machine builder – precalculations of yield, energy balance, manpower – cost-effectiveness review by customer – award of contract – development of machine concept – development of tooling concept – adjustment of solution and requirements with the customer – implementation of the installation.

Summary of findings from this project, especially with regard to the energy balance of the installation and other possible uses for other applications with inserts, such as head rests, for example

## Wednesday, 17<sup>th</sup> May 2006

### 10:20 New connecting elements for lightweight construction

**Lothar Gens**, Cert. Eng., EJOT GmbH & Co. KG, Bad Laasphe

New connecting elements for lightweight construction – reasons – overview – new connecting elements – EJOT EPPsys D, directly threaded connections not only for EPP foam – product, performance characteristics, examples of application – EJOT EPPsys DR – directly threaded connections with latching hooks – product, performance characteristics, examples of application – EJOT EPPsys RSD – friction welding in EPP foam – product, performance characteristics, examples of application – further potential

### 10:50 Block moulding in comparison with single-plate production: energy consumption, cutting and cost reduction

**Prof. Dr. Volker Altstädt**, Dr. Jan Sandler, University of Bayreuth, Chair of Polymer Materials, Bayreuth, Christian Traßl, Cert. Eng., Dr. Dieter Kunz, Dr. Stephan Roth, Neue Materialien Bayreuth GmbH, Bayreuth  
Block moulding – energy consumption – cutting – cost reduction – plate production – cost relationships

### 11:20 Coffee break and snack

## Risk management and rating

### 12:00 Risk engineering in foam-processing companies from the point of view of an industrial insurer

**Wolfgang Hensel**, Cert. Eng., Gerling Allgemeine Versicherung, Leonberg

Fire loads and flammability of materials – process chart – critical areas relating to fire – organisational protective measures – protective measures relating to installations and processes – protective measure relating to fire – experience from other claims – risk assessment by property insurer – risk-related requirements for adequate insurance cover

## Wednesday, 17<sup>th</sup> May 2006

12:40 The Dresdner Bank company rating:  
advantages and opportunities

**Volker den Ouden**, Dresdner Bank AG, Frankfurt

What Basel II means – rationale and content of a company rating – comparison of a bank rating and an external rating – the Dresdner Bank rating for mid-sized and large companies – advantages of ratings – risk-oriented pricing and credit cost leeway – summary and outlook

13:20 Farewell address

13:30 End of the conference

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## Information

The price includes the [conference handbook](#), [beverage during breaks](#), [lunch](#) and also the [evening event](#). The conference handbook will be distributed on the spot to attendees.

**Additional offer:** If you attend the conference, we offer you a one-off opportunity of VDI membership for six months free of charge. werden.

### Information and Registration

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**Applications** must be made in writing. We will send you confirmation of registration and the invoice. Please do not pay the conference fee until you have received the invoice.

Together with the [booking confirmation](#) you will receive information on how to get to the conference.

### Conference location and conference office

#### Best Western Grand Hotel de l'Empereur

Stationsstraat 2

6221 BP Maastricht, Netherlands

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### Conference languages

German and English (with simultaneous translation)

Terms and Conditions: Upon registering, the participant accepts the terms and conditions of VDI Wissensforum IWB GmbH. Cancellations must be made in writing. If registration is cancelled 14 days prior to commencement of the conference, an administration fee of EURO 50 plus VAT will be charged. After this date, the invoiced participation fee is payable in full. The postmark is decisive. In this case the conference documents will, upon request, be sent to the participant. It is possible for someone to attend the course instead of a registered person by arrangement with VDI Wissensforum IWB GmbH. If a course has to be cancelled due to unforeseen circumstances, participants will be immediately notified. In this case, the participation fee will be fully refunded if already paid. In exceptional cases, we reserve the right to change lecturers and/or the conference content without prior notice. In any event, the liability of VDI Wissensforum IWB GmbH is limited solely to the participation fee.

## Information

### Hotel Accomodation

Room contingents have been reserved for the conference participants in the following hotels in Maastricht. Please reserve your room directly online [www.vdi.de/particlefoam](http://www.vdi.de/particlefoam) "Hotelinformation" via Maastricht Booking Service until **17<sup>th</sup> April 2006**, code: "**VDI Particle Foam**".

Request for a hotel reservation via fax or e-mail to:

Maastricht Booking Service

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### **Best Western Grand Hotel de l'Empereur**

Stationsstraat 2, NL-6221 BP Maastricht

EZ 125,50 EUR, DZ 141,00 EUR (incl. breakfast) + city tax

### **Novotel Maastricht**

Sibemaweg 10, NL-6227 AH Maastricht

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### **Hotel Golden Tulip Apple Park Maastricht**

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Kleine Gracht 4, NL-6211 CB Maastricht

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# Anmeldeformular / Registration Form

## Particle Foam 2006

(IWB) 328608

16<sup>th</sup> and 17<sup>th</sup> May 2006 in Maastricht

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