INTERNATIONAL VDI CONFERENCE 2013

ENERGY AND MATERIALS FROM WASTE

Renowned speakers will present their results on the following topics:

- Current developments in waste management across Europe
- European recycling and resource efficiency
- Market development in key-countries
- Recycling of residues from Waste-to-Energy operations
- Efficiency in energy recovery in Waste-to-Energy plants
- Effective plant optimization and best practices

Date and venue:
May 14–15, 2013
Frankfurt, Germany

Chairmen:
Jan Manders, Deputy President, CEWEP, Brussels, Belgium
Dr.-Ing. Ragnar Warnecke, Managing Director, Gemeinschaftskraftwerk Schweinfurt GmbH, Schweinfurt, Germany

An event organized by VDI Wissensforum GmbH
www.vdi.de/wastetoenergy
10:00 Registration & welcome coffee

10:30 Chairmen’s welcome and opening address

DEVELOPMENTS IN WASTE MANAGEMENT ACROSS EUROPE
Moderation: Jan Manders

10:45 Trends, opportunities and challenges in waste management in Europe
- Trends in waste generation and management in Europe for different waste streams
- Overview of EU targets related to waste and outlook into future EU waste policy developments
- Projections of municipal waste management in the EU and associated GHG emissions

Dipl.-Ing. Almut Reichel, Project Manager, European Environment Agency (EEA), Copenhagen, Denmark

11:15 Waste-to-Energy in EU legislation
- The EU’s energy and resource efficiency policy
- Material recycling from bottom ash – Contributing to Europe’s Resource Efficiency
- Review of the European Waste Catalogue
- Review of Best Available Techniques Reference documents

Dr. Ella Stengler, Managing Director, Confederation of European Waste-to-Energy Plants (CEWEP), Brussels, Belgium

11:45 Sustainable European waste systems
- Life-Cycle Assessment (LCA) and system analysis
- Future European waste management systems
- Global warming accounting in waste management

Prof. Dr. Thomas Højlund Christensen, Department of Environmental Engineering, co-authors: Dr. Jacob Moeller, Technical University of Denmark, PhD Mario Grosso, Politecnico di Milano, Italy

12:15 Choosing the most appropriate technology for today’s markets
- Economic background to energy recovery options
- Waste conversion opportunities to plug resource gaps
- Reviewing new technologies and current status
- New energy and fuel recovery options – Economic potential

Jeff Cooper, M.Sc., Independent Consultant, Former President of International Solid Waste Association (ISWA), London, UK

12:45 Lunch

RECYCLING AND RESOURCE EFFICIENCY ACROSS EUROPE
Moderation: Dr.-Ing. Ragnar Warnecke

14:00 Europe’s emphasis on recycling and resource efficiency
- A challenging EU resource perspective
- State of the art of recycling in Europe
- Regulatory development influencing resource efficiency
- Future prospective for recycling
- Case studies of recycling and circular economy

Freek van Eijk, M.Sc., Director Strategy & Marketing, SITA Northern Europe Waste Services, Arnhem, The Netherlands

14:30 Consequences of waste prevention and recycling for incineration of municipal waste with regards to planning capacities and profitability
- Role of waste prevention in Central European countries
- Development of supply-demand-ratio – Waste for combustion and WtE-facilities
- Gate fees for waste in Central Europe
- Energy supply as increasing revenue source – Lessons learnt from new plants in the Netherlands and Germany

Dr. Hilmar Westholm, Head of Department, Environment and Waste Management, trend:research GmbH, Bremen, Germany
15:00 Plastic recovery from municipal solid waste: Comparative assessment of different scenarios
  • Plastic recycling schemes
  • Life-Cycle Assessment
  • Material and energy recovery from plastic waste

PhD Mario Grosso, Researcher, Politecnico di Milano, Milano, Italy, co-author: Prof. Dr. Thomas Højlund Christensen, Technical University of Denmark

15:30 Biowaste to Energy
  • Technical concepts of biowaste treatment
  • Emission situation on biogas facility
  • Greenhouse gas balances of the process
  • Optimization potential

Dr.-Ing. Jan Liebetrau, Head of the Biochemical Conversion Department, Deutsches Biomasseforschungszentrum gGmbH (DBFZ), Leipzig, Germany

16:00 Networking & coffee break

DEVELOPMENTS IN ESTABLISHED AND EMERGING MARKETS
Moderation: Dr.-Ing. Gert Riemenschneider, Managing Director, Fisia Babcock Environment, Germany

16:30 Energy-from-Waste in established European markets
  • Characterization of the markets in Germany, Austria, the Netherlands and Sweden
  • Historical Energy-from-Waste capacity development and main drivers
  • Waste arisings and treatment capacities

Dr.-Ing. Hansjörg Roll, Managing Director, Dipl.-Ing. (FH), co-author: M.A. Philipp Chartschenko, MVV Umwelt GmbH, Mannheim, Germany

17:00 Status and outlook of the Energy-from-Waste market in the UK
  • Legal framework, market situation
  • Key market drivers, development of the treatment capacity

  • Energy utilization

Dipl.-Ing. Rolf Kaufmann, Managing Director, co-author: Birgit Fröhlig, M.A., E.ON Energy from Waste UK Ltd., Coventry, UK

17:30 Opportunities and challenges in Southern and Eastern Europe
  • Overview and status quo
  • Market development in focus countries
  • Challenges and difficulties
  • Projects – realized / in the process of realization / planned
  • Outlook on future developments

Dipl.-Phys. Edmund W. Fleck, Managing Director, Martin GmbH für Umwelt- und Energietechnik, Munich, Germany

18:00 Energy-from-Waste in China – Market situation and specific features from a European supplier’s point of view
  • Market overview
  • Typical contact approach
  • Specific contract challenges
  • Price situation
  • Future developments and trends

Dipl.-Kfm. Jörg Finkler, Head of Proposal Management, Fisia Babcock Environment, Gummersbach, Germany

18:30 Panel discussion with
PhD Mario Grosso, Prof. Dr. Thomas Højdlund Christensen, Freek van Eijk, M.Sc., Dr.-Ing. Ragnar Warnecke, Dr. Ella Stengler
Moderation: Jan Manders

19:00 End of conference day one

Evening Reception
At the end of the first conference day we kindly invite you to our evening reception. Enhance your personal network and use the relaxed and informal atmosphere for deepening talks with other participants and speakers.
**RECYCLING OF RESIDUES FROM WASTE-TO-ENERGY OPERATIONS**  
Moderation: Dr.-Ing. Ragnar Warnecke

**09:00 Metals in bottom ash and how they can be recycled**  
- Bottom ash composition depending on particle size distribution  
- What is needed to recycle metallic and oxidized waste material?  
- What can be the effect of metal separation on the quality of bottom ash?  
- Calculation of metal recycling potentials from bottom ash  
Prof. Dr.-Ing. Rüdiger Deike, Department of metallurgy and steelmaking, University of Duisburg-Essen, Duisburg, Germany

**09:30 Incinerator Bottom Ash (IBA) – A valuable resource**  
- Current UK practice and objectives  
- Comparison with some other European practices  
- Use of IBA aggregate  
- Health and environmental risk perceptions and realities  
- Waste or resource?  
David York, DipHCM, MCIHT, Chairman, Ballast Phoenix, Bourne, UK

**10:00 Recycling of metals and minerals from bottom ash**  
- Fundamental new technology to treat bottom ash  
- Novel ways of using the mineral fraction of the bottom ash  
- Introduction to the cooperation service-concept  
Eike Jäger, Managing Director, Inashco Technology, Mörs, Germany

**10:30 Networking & coffee break**

**EFFICIENCY IN ENERGY RECOVERY IN WASTE-TO-ENERGY OPERATIONS**  
Moderation: Jan Manders

**11:00 The importance of Waste-to-Energy Energy Efficiency**  
- The EU R1 formula and its implementation  
- European surveys of WtE-plant energy efficiency by CEWEP  
- The proposal for a climate correction factor for WtE  
- Energy efficiency and Best Available Techniques (BAT)  
Hubert de Chefdebien, Director Public Affairs, CNIM, Paris, France

**11:30 High energy efficiency in a combined heat and power plant**  
- Energy efficiency in a Swedish WtE-plant  
- Optimum utilization of heat  
- Flue gas condensation in combination with a heat pump  
- The importance of low district heating forward and return temperature  
Lars Jacobsson, M.Sc., Energy Manager, Sysav AB, Malmö, Sweden

**12:00 Fuel quality variations in Waste-to-Energy-plants**  
- Plant design concept and presentation  
- Use of different waste converted fuels (domestic waste, RDF, SRF) in WtE-plants  
- Operation experiences with variations in fuel quality  
- Environmental aspects with variations in fuel quality  
Egil Evenson, Technical Director, Statkraft Vame AS, Trondheim, Norway

**12:30 Lunch**

**EFFECTIVE WASTE-TO-ENERGY-PLANTS OPTIMIZATION AND BEST PRACTICES**  
Moderation: Dr.-Ing. Ragnar Warnecke

**13:30 Greater Manchester: From Waste-to-Energy for chemical industry**  
- Plant design presentation  
- Reduction of carbon footprint with waste-fired CHP  
- CHP design concepts and guidelines  
Dr. Ir. Johan De Greef, Technology (R&D) Manager, Keppel Seghers Belgium NV, Willebroek, Belgium

**14:00 High Efficiency Waste-to-Energy: Amsterdam´s experience after 5 years of operation**  
- Operational experience with high efficiency WtE-plant  
- Boiler design and turbine layout  
- Corrosion resistance properties  
Ing. mbe Peter Simoës, Strategic Advisor, Afbal Energie Bedrijf, Amsterdam, The Netherlands, co-author: Marcel van Berlo, AEB Amsterdam, The Netherlands

**14:30 The next generation of waste fired power plants NextBAT™**  
- Next generation of best available technology standards  
- Advantages of BREF: Higher efficiency and lower emission
• Novel plant design tools
• Technology overview: new technologies to decrease corrosion for super heaters
• First experiences with new combustion grate

Ole Hedegaard Madsen, M.Sc., Director Technology, Babcock & Wilcox Vølund A/S, Glostrup, Denmark

15:00 Networking & coffee break

EFFICIENT FLUE GAS TREATMENT
Moderation: Jan Manders

15:30 VAPOLAB - the most enhanced dry sorption flue gas cleaning system
• The new way of reactivating the residues
• Step forward in enhancing the stoichiometric ratio
• Easy retrofitting of dry system with significant operating cost improvement
• Increase of energy recovery

Christian Bessy, Marketing & Sales Director, Vincent Martinat, Area Business Manager, LAB SA, Bossuet, France

16:00 Multifunctional scrubber in combination with dry or semi-wet flue gas cleaning
• The Scandinavian solution to the next generation flue gas cleaning
• Multifunctional scrubbers with integrated dioxin and fine particle removal
• Extended energy recovery and emissions reduction
• CUTNOX – A novel primary measure for NOx reduction in grate fired furnaces
• Sulphur Recirculation for reducing boiler corrosion and dioxin formation

Dr. Sven Andersson, Senior Process Engineer, Götaverken Miljö AB, Göteborg, Sweden

16:30 Chairmen’s closing remarks

16:45 End of conference
MERCURY ABATEMENT AND MEASUREMENT

The conference will cover all aspects of how emissions from human activities can be reduced – with a special focus on:

• What are the main factors for a good mercury capture in dry and wet flue gas cleaning devices?

• How does the mercury oxidation by SCR-DeNOx-catalysts work?

• What can be problems if we measure mercury emissions or calibrate continuous monitoring devices?

• How can additives increase the mercury abatement?

• What are the main requirements of the authorities in Europe?

You will meet international experts representing utilities, governmental bodies, research institutes and commercial industries, allowing discussion of how they can work together to address the problem of mercury emissions.

Conference Presidents will be Prof. Dr. rer.nat. Heinz Gutberlet, former head of analytics and process optimization of e-on Engineering GmbH, now head of the Gutberlet Consulting GmbH in Raesfeld, Germany and Dr.-Ing. Rico Kanefke, Manager of the Waste-Incineration Plants of Currenta (a joint venture of BAYER and LanXess) in Leverkusen, Germany.

**Date and venue:**
October, 17 and 18, 2013
Berlin, Germany

An event organized by VDI Wissensforum GmbH
Find more information here: www.vdi.de/mercury
EXHIBITION / SPONSORING

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TERMS AND CONDITIONS

Applications: Applications for conference attendance must be made in writing. Confirmation of your registration and the associated invoice will be mailed to you. Please do not pay your conference attendance fee until you will have received our invoice and its invoice number to be stated for transfer.

Conference venue:
Intercity Frankfurt Airport
Am Luftbrückendenkmal 1, 60549 Frankfurt
Telephone: +49.69.69709-480, Fax: +49.69.69709-444
Email: meetings@frankfurt-airport.intercityhotel.de
Web: http://www.intercityhotel.com

Hotel room reservation: A limited number of rooms have been reserved for the benefit of the conference’s participants at the Intercity Frankfurt Airport, Am Luftbrückendenkmal 1, 60549 Frankfurt, Germany
Telephone: +49 69 69709-480, Fax: +49 69 69709-444,
Email: meetings@frankfurt-airport.intercityhotel.de
Please refer to “VDI Conference”. For more hotels: www.vdi-wissensforum.de/hrs

VDI Wissensforum service package: The conference package includes the conference documents (online), beverages during breaks, lunch and the social evening event on May 14, 2013.

Conference attendance conditions and terms: By way of your registration you accept the conference attendance conditions and terms of VDI Wissensforum GmbH as binding. Any cancellation of your registration must be made in writing. We will charge you only an administrative fee of € 50.00 plus German VAT if you cancel your registration earlier than 14 days ahead of the conference date. Any cancellation that reaches us after this deadline will entail the conference attendance fee as stated in our invoice to be charged in full. The date of the post office stamp of your written cancellation will be the decisive criterion. In that case, we will gladly mail you the conference documents on request. Subject to agreement, you may name a substitute participant. Individual parts and sections of conferences and seminars cannot be booked. You will be informed without delay if an event has to be cancelled for unforeseeable reasons. In that instance, you will be entitled only to a refund of your conference attendance fee if already paid. We reserve the right to exchange speakers and/or change the programme sequence in exceptional cases. In any case, the liability of VDI Wissensforum GmbH is restricted exclusively to the conference attendance fee.

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