Waste-to-Energy

8th and 9th September 2014
Vienna Marriott Hotel
Parkring 12a – 1010 Vienna, Austria

Issues

International Development
Legislation, strategies and country reports

Waste Incineration
Technology of waste incineration • Energy efficiency and use
Flue gas treatment • Treatment and utilization of slag

Alternative Waste-to-Energy Processes
Mechanical-biological treatment • Utilization of solid recovered fuels
Fermentation and utilization of biogas • Pyrolysis and gasification

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Professor Dr. Franz Winter
Vienna University of Technology, Institute of Process Engineering, Environmental Technology and Technical Biosciences, Austria

Senol Yildiz, Ph. D.
Deputy General Manager of Istanbul Environmental Management, Industry and Trading Company (Istaç A.Ş.), Turkey
8th September 2014

**Plenary Session**

**PRESENTATION: PROFESSOR DR. DR. KARL J. THOMÉ-KOZMIENSKY**

- **9.00 Hrs.** European waste management legislation and its amendment  
  Karl-Friedrich Falkenberg, General Director DG Environment  
  European Commission, Brussels, Belgium

- **9.30 Hrs.** Current developments in European waste-to-energy  
  President Ferdinand Kleppmann  
  CEWEP – Confederation of European Waste-to-Energy Plants, Düsseldorf, Germany

- **10.00 Hrs.** Incineration – an indispensable element of a responsible waste management  
  Dipl.-Chem.-Ing. Luciano Pelloni  
  Chairman of IRF International Recovery Foundation, Zurich, Switzerland

- **10.30 Hrs.** Review of the Best Available Techniques Reference Document (BREF) for waste incineration and interactions with other BREFs  
  Simon Holbrook, European IPPC Bureau (EIPPCB)  
  European Commission, Joint Research Centre, Seville, Spain

- **11.00 Hrs.** Coffee Break

**PRESENTATION: PROFESSOR DIPL.-ING. DR. TECHN. HARALD RAUPENSTRAUCH**

- **11.30 Hrs.** Incineration – alternative processes – recycling  
  Professor Dr. Dr. h. c. Karl J. Thomé-Kozmiensky  
  Dr.-Ing. Stephanie Thiel

- **12.00 Hrs.** The development of waste incineration in Europe  
  Managing Director Dipl.-Ing. Johannes J. E. Martin, Dipl.-Ing. Ulrich Martin  
  Martin GmbH für Umwelt- und Energietechnik, Munich

- **12.30 Hrs.** Possibilities to elevate the energy efficiency of waste incineration plants  
  Dr.-Ing. Gert Riemenschneider  
  Managing Director of Fisia Babcock Environment GmbH, Gummersbach, Germany

- **13.00 Hrs.** Lunch Break

**PRESENTATION: PROFESSOR DR.-ING. MARTIN KRANERT**

- **14.00 Hrs.** Balancing and energy efficiency of waste treatment processes  
  Professor Dr.-Ing. Michael Beckmann  
  Dipl.-Ing. Tobias Widder  
  Technical University Dresden, Germany

**Country reports**

- **14.30 Hrs.** Paradigm shift in the British waste management sector – from landfilling to incineration –  
  Paul Carey  
  Director of MVV Environment Ltd, London, United Kingdom

- **15.00 Hrs.** Experiences in new EU accession countries  
  Mag. Gerhard Ziehenberger, Member of the Executive Board  
  Dipl.-Ing. Michaela Heigl  
  Saubermacher Dienstleistungs AG, Feldkirchen near Graz, Austria

- **15.30 Hrs.** Coffee Break

**PRESENTATION: DR.-ING. STEPHANIE THIEL**

- **16.00 Hrs.** Turkey achieves EU standards till 2030  
  Professor Dr.-Ing. Oktay Tabasaran  
  Istanbul, Turkey and Stuttgart, Germany

- **16.30 Hrs.** Waste generation and disposal methods in emerging countries  
  Adj. Professor Dr.-Ing. habil. Abdallah Nassour  
  University of Rostock, Department of Waste Management in Arab Countries, Germany

- **17.00 Hrs.** A guidebook for sustainable waste management in Latin America  
  Associate Professor Dr. Constantinos Psomopoulos  
  Director of Electric Power Division, Technological Education Institution of Piraeus  
  Egaleo, Greece  
  Vice President of the Waste to Energy Research & Technology (WTERT)  
  Council Greece – SYNERGIA

- **19.30 Hrs.** Evening Reception
## Incineration

### 8.30 Hrs. Decision-making processes in resource recovery from waste
Dipl. Natw. ETH Trimurti Irzan, Member of the Management of TBF + Partner AG, Consulting Engineers, Zurich, Switzerland

### 8.50 Hrs. Waste availability, successful regional strategies and shaping new waste-to-energy projects
Assistant Professor Ing. Martin Pavlas, Ph. D., Technical University of Brno, Czech Republic

### 9.10 Hrs. A zero-waste and energetically optimized waste-to-energy concept
Dr.-Ing. Margit Löscher, Dipl.-Ing. Günter Nebocat
Pöyry Deutschland GmbH, Germany

### 9.30 Hrs. Layout planning of waste-to-energy plants
Dipl.-Ing. Falko Weber
Managing Director of Envi Con & Plant Engineering GmbH, Nuremberg, Germany

### 9.50 Hrs. Discussion

### 10.00 Hrs. Coffee Break

### 10.30 Hrs. High efficient waste-to-energy facilities
Inger Anette Søndergaard, Head of Department Waste-to-Energy
Tore Hulgaard, Senior chief consultant Flue gas treatment
Lasse Tobiasen, Chief consultant Energy
Ramboll Group A/S, Copenhagen, Denmark

### 11.00 Hrs. Impact of operation mode and design on the energy efficiency of waste combustion plants
Dr. ir. Johan De Greef, Technology Project Manager
Keppel Seghers Belgium NV, Willebroek, Belgium

### 11.30 Hrs. The waste-to-energy plant Krakow – Proceedings regarding the realisation of thermal waste treatment in Poland –
Dipl.-Wirtsch.-Ing. Gerhard Lohe, Director Business Development
Doosan Lentjes GmbH, Ratingen, Germany

### 13.00 Hrs. Waste-to-energy plant as part of combined heat and power strategy – using the example of the Klaipeda plant –
Kalle-Erkki Penttilä, Head of Investments and M&A, Fortum Heat Poland

### 13.30 Hrs. Waste management in the metropolis of Istanbul – Waste incineration and energy production facility in Istanbul –
Senol Yildiz, Ph. D., Deputy General Manager of Istanbul Environmental Management, Industry and Trading Company (İstaç A.Ş.), Şişli-Istanbul, Turkey

### 14.00 Hrs. Flue gas cleaning today – Available technologies and latest developments –
Dipl.-Ing. Christian Fuchs, Deputy Managing Director of LAB GmbH, Stuttgart, Germany

### 15.00 Hrs. Assessment of dry and semi-dry sorption procedures on the basis of practice-related examples from the field of incineration plants
Dipl.-Ing. Rüdiger Margraf
Managing Director of LUEHR FILTER GmbH & Co. KG, Stadthagen, Germany

### 15.30 Hrs. Recycling of waste incineration ash – Production of non-ferrous metal scrap products and a marketable mineral aggregate –
Rogier van de Weijer
Business Development Director of Inashco B.V., Rotterdam, Netherlands

### 16.00 Hrs. Optical sorting for the recovery of glass from WIP slags – pilot plant in Bratislava/Slovakia –
Dipl.-HTL-Ing. Christian Makari
Binder + Co AG/Environmental Technology, Gleisdorf, Austria

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### Examples of waste incineration plants

#### 11.30 Hrs.
- Thermal waste treatment plant Spittelau – New construction to the existing plant –
  Dr.-Ing. Frank Schumacher, MH Power Systems Europe Service GmbH (only book)
  Dipl.-Ing. Dr. Philipp Krobath, Ing. Erich Pawelka, Ing. Ulrich Ponweiser, Wien Energie GmbH
  Dipl.-Ing. Martin Höbler, MH Power Systems Europe Service GmbH

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- Waste-to-energy plant Krakow
  – Proceedings regarding the realisation of thermal waste treatment in Poland –
    Dipl.-Wirtsch.-Ing. Gerhard Lohe, Director Business Development
    Doosan Lentjes GmbH, Ratingen, Germany

#### 13.30 Hrs.
- Waste management in the metropolis of Istanbul
  – Waste incineration and energy production facility in Istanbul –
    Senol Yildiz, Ph. D., Deputy General Manager of Istanbul Environmental Management, Industry and Trading Company (İstaç A.Ş.), Şişli-Istanbul, Turkey
Alternative Waste-to-Energy processes

Pyrolysis and gasification

8.30 Hrs. State of the art of alternative thermal processes
Professor Dr.-Ing. Peter Quicker
RWTH Aachen, Unit of Technology of Fuels, Germany

9.00 Hrs. Waste gasification technology with direct melting for energy and material recovery
M. Sc. Nobuhiro Tanigaki, Chief Technical Manager
Nippon Steel & Sumikin Engineering Co., LTD.

9.30 Hrs. Refuse derived fuel gasification technologies for high efficient energy production
Dr. Markus Bolhär-Nordenkampf, Director, Central Eastern Europe & Middle East
Valmet GesmbH, Vienna, Austria
Dipl.-Ing. Juhani Isaksson, Director Gasification, Valmet Power Oy, Tampere, Finland

10.00 Hrs. Coffee Break

PRESENTATION: ASSISTANT DIRECTOR HENRIK LYSTAD, WASTE MANAGEMENT NORWAY

10.30 Hrs. The biobattery – Integrated heat and power generation from biomass, waste and residues via intermediate pyrolysis/reforming
Professor Dr. rer. nat. Dipl.-Ing. Andreas Hornung
Director of the European Bioenergy Research Institute (EBRI), Aston University
Birmingham, United Kingdom
Director of the Institute Branch Sulzbach-Rosenberg, Fraunhofer UMSICHT, Germany

Fermentation and biogas utilisation

11.00 Hrs. Eco-efficiency comparison of fermentation, composting and incineration of bio waste
Managing Director Professor Dr.-Ing. Wolfgang Rommel
Dipl.-Ing. Thorsten Pitschke, Dipl.-Ing. René Peche, Dr. rer. agr. Dieter Tronecker
Deputy Managing Director Dr. rer. nat. Siegfried Kreibe
bifa Umweltinstitut GmbH, Augsburg, Germany

11.30 Hrs. Application of anaerobic digestion for the treatment of municipal solid waste in several projects
Dipl. oec. Univ. Martin Hagenmeyer, Business Development Manager
STRABAG Umweltanlagen GmbH, Linz, Austria

12.00 Hrs. Lunch Break

PRESENTATION: PROFESSOR DR.-ING. ANKE BOCKREIS

13.00 Hrs. The success story of Scandinavian biogas industry
Henrik Lystad, Assistant Director of Avfall Norge/Waste Management Norway, Oslo, Norway
and Member of the Board of the European Compost Network (ECN)

13.30 Hrs. Utilisation of biogas
Dr.-Ing. Alexander Gosten, Berliner Stadtreninigungsbetriebe (BSR), Germany

Mechanical-biological waste treatment

14.00 Hrs. Best Available Techniques (BAT) for mechanical-biological waste treatment plants
Professor Dr.-Ing. Anke Bockreis, Vice Rector for Infrastructure
University of Innsbruck, Austria

14.30 Hrs. Coffee Break

PRESENTATION: UNIV.-PROFESSOR DIPL.-ING. DR. MONT. ROLAND POMBERGER

15.00 Hrs. Mechanical-biological stabilisation plant in Fusina near Venice/Italy (260,000 t/y)
– Twelve years of operating experience –
Dr.-Ing. Simone Paoli, Ladurner srl, Bolzano, Italy

Solid recovered fuels

15.30 Hrs. Concepts for processing of solid recovered fuels from different waste origin for waste-to-energy plants
Ing. Michael Pinkel, Ing. Jürgen Deditz
IUT Ingenieurgemeinschaft Innovative Umwelttechnik GmbH, Seebenstein, Austria
Univ.-Professor Dipl.-Ing. Dr. mont. Roland Pomberger
University of Leoben, Chair of Waste Processing Technology and Waste Management, Austria

16.00 Hrs. Use of solid recovered fuels in the cement industry
Univ.-Professor Dipl.-Ing. Dr. mont. Roland Pomberger, University of Leoben
Chair of Waste Processing Technology and Waste Management, Austria
The IRRC is a forum for the exchange of information about materials flow management and closed substance cycle, applied technologies as well as organisational forms of countries that largely comply with the EU-norms and those that are only at the beginning of this development.

Internationally acknowledged speakers of the industry, from politics, science, and technology will present the current themes and discuss them with the participants. The exchange of experiences, ideas, and concepts will give impulses for cooperation and is going to promote development particularly in the new EU-member states.

About 270 participants from more than twenty countries attended our last congresses, which took place in Warsaw and Berlin. The international character of the congress shall be developed successively. For 2014, in addition to the German-speaking region, the following countries are envisaged amongst others: Czech Republic, Poland, Serbia, Russia, Great Britain and Turkey.

This year’s IRRC – Waste-to-Energy – is going to take place on 8th and 9th September in Vienna. With the congress venue Vienna additional participants from the above mentioned and other countries shall be attracted.

On the first day of the English congress, there will be a plenary session with political and strategic presentations.

On the second day there will be two parallel sessions, in which projects and technical developments are going to be presented. Scheduled are the subjects incineration – technology of waste incineration, energy efficiency and use, flue gas treatment, treatment and utilization of slag – and alternative Waste-to-Energy processes – mechanical-biological treatment, utilization of solid recovered fuels, fermentation and utilization of biogas, pyrolysis and gasification.

At the congress we are publishing an English book of about 400 pages containing the elaborated articles written by the lecturers.

Karl J. Thomé-Kozmiensky
Excursion to waste incineration plants in Vienna

Plant-Overview – Brochure We Serve Vienna
Tour surveying plant in Vienna (guided tour in English):

Pfaffenau waste incineration plant

Since autumn 2008, the Pfaffenau waste incineration plant (German acronym “MVA”) has been producing approx. 410 GWh (gigawatt hours) of district heat and 65 GWh of electricity from approx. 250,000 tonnes of residual waste annually, thereby supplying approx. 50,000 Viennese households with district heating and approx. 25,000, with electricity. A four-stage flue gas scrubbing plant decreases emissions to a minimum.

Waste logistics centre

Simmering waste logistics centre (German acronym “ALZ”): the most recent element of the comprehensive waste disposal system of Vienna is provided by the new Pfaffenau waste logistics centre in the 11th municipal district Simmering. This high-tech installation adjacent to the Pfaffenau waste incineration plant serves for the processing and interim storage of residual and bulky waste. If necessary, the pre-treated, compacted waste is wrapped in air-tight bales and stored until incineration without releasing unpleasant odours. This ensures reliable disposal even in case of repairs or downtimes at waste incineration plants. The facility ensures that all waste collected can be properly disposed of, irrespective of the waste volume or capacity utilisation of Vienna’s waste incineration plants.

Rinter Tent

The Rinter Tent (or “MA 48 Tent”) is the central hub of separate recyclable collection. This is where the various fractions are re-sorted, stored on an interim basis and then sent on by rail for further processing. Problematic waste is likewise sorted and stored here temporarily at a special collection point before recycling or final disposal. Waste incineration residues (ash and slag) are demetallised and converted into slag-ash concrete.

Rautenweg landfill

This concrete is then properly disposed of at the Rautenweg landfill. The local groundwater stratum is protected by a retaining wall (“Vienna sealed-wall chamber system”). Moreover, the landfill boasts a unit for landfill gas capturing and utilisation, which generates electricity for approx. 2,200 households, and operates several technical and organisational safety installations.
Conditions of Participation and Services

How to register
With the registration you acknowledge the terms and conditions of TK Verlag Karl Thomé-Kozmiensky as binding.

The registration of participants must be in writing either by e-mail, by mail, by fax or online using the application form. Please use a separate form for each applicant. It is not possible to register only for parts of the event, unless stated otherwise in the programme. On receipt of your application we will send you an invoice for your participation fee, which also serves as a confirmation of your registration.

If you are unable to attend the congress or the excursion, your registration can be delegated to a substitute person. Cancellation requests for the congress must be received in writing on or before the cancellation deadline of 8th August 2014. Cancellation requests for the excursion must be received in writing on or before the cancellation deadline of 1st September 2014. Written notifications are accepted via email, mail or fax. Cancellations received on or before the respective deadline will receive a refund of the paid fees minus an administration fee of 50,- EUR + VAT for congress cancellations and of 10,- EUR + VAT for excursion cancellations. Cancellations received after the respective cancellation deadline will not be issued a refund. Any unpaid congress fees are due and payable to TK Verlag Karl Thomé-Kozmiensky. Congress documents will be sent to registered attendees, who were unable to participate. If the congress must be cancelled or moved to another date, all registered participants will be informed instantly. For losses resulting from the cancellation of the congress TK Verlag Karl Thomé-Kozmiensky is not liable. The invoice amount already paid by the participants will be refunded immediately.

The organizers will provide a reduced conference registration fee for participants from economically weak countries, including the new EU-member states and full-time professionals of public authorities or universities.

Reduced fee for students
Reduced fee for participants from economically weak countries, including the new EU-member states and full-time professionals of public authorities or universities

The programme is subject to alterations.

Fax Registration for the IRRC Waste-to-Energy +49.3391-45.45-10

I submit my binding application to attend the IRRC Waste-to-Energy from 8th to 9th September 2014 in Vienna.

I accept the terms and conditions.

I will pay the following congress fee(s) after receiving my invoice:

- 890,- EUR + VAT. Participants from the EU-15, the EFTA countries, and overseas
- 300,- EUR + VAT. Reduced fee for participants from other countries, public authorities and universities
- 100,- EUR + VAT. Reduced fee for students
- 20,- EUR + VAT. Excursion on 10th September 2014

I will attend the evening event on 8th September 2014

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