

5th International VDI Conference

Energy and Materials from Waste

April 9 – 10, 2019 in Antwerp, Belgium

- W-t-E in the context of international Legislation and Policy
- Emerging Markets and recent Developments
- Cutting Edge Use Cases in Ressource & Energy Recovery
- State-of-the-Art Plant Technology
- Future of Circular Economy

+ Excursion to **INDAVER** and **SLECO** Joint Venture Waste-to-Energy Plant **ECLUSE**

Keynote:
Indaver NV

Meet international Experts from:



08:30 Registration & Welcome Coffee

09:00 Welcome and opening address

Chair: **Prof. Peter Quicker**, Chairholder, RWTH Aachen - Unit of Technologies of Fuels, Germany; **Dr.-Ing. Ragnar Warnecke**, Managing Director, GKS - Gemeinschaftskraftwerk Schweinfurt GmbH, Germany

I. Legislation, Policy and Legal Implications for international Projects

09:15 EU Legislation on Energy and Materials from Waste

- Recycling: Quantity vs. quality?
- How to achieve a non-toxic environment?
- Diversion from landfills
- Boosting recovery from bottom ash

Dr. Ella Stengler, Managing Director, CEWEP, Belgium

09:45 Implementing EU Waste Rules and Recycling Goals

- Sources of EU waste legislation & control and procedure by the EU
- Main targets, time horizon 2020 and 2030
- Current implementation in member countries
- Investments and markets

Mark Döing, General Manager, ecoprog GmbH, Germany

10:15 Pursuing Energy from Waste Projects: Structures and recent Developments in the Middle Eastern and North African Region

- Market overview and driver
- Regulatory framework on selected countries
- Case studies: Kuwait, Dubai and Oman
- Legal pitfalls and considerations

Dr. Tobias Faber, Lawyer/Partner, Hogan Lovell, Germany

10:45 ☕ Networking & Coffee Break

II. Perspectives on Emerging and Established Markets

11:15 The future Role of WtE in the Circular Economy

- Sustainability and value creation through CE
- Residual waste produced within CE and how to deal with it through WtE
- Double role of WtE: Use of residual waste & keeping circles safe and clean
- WtE as an enabler to make CE happen
- The need of further investments to achieve CE package goals

Paul De Bruycker, CEO, Indaver NV, Belgium

11:45 Emerging Countries and Markets for Waste-to-Energy

- Global waste development, EfW market overview
- Importance of value chain
- Alternative waste management strategies
- Dynamic of selected „Waste-to-Energy“ emerging markets

Amedeo Vaccani, Managing Director, A.Vaccani&Partner, Switzerland

Keynote

12:15 The Role of Product Regulations and Standards in the Circular Economy

- Revisiting the concept of end-of-waste and its function in a circular economy
- How "circular" are existing product regulations and standards?
- How to deal with the absence of (circular) product regulations and standards?
- Contribution of product regulations and standards to secondary products and raw materials movement in the internal market

Emiel de Bruijne, Consultant, co-author: Ferdinand Zotz, both: Resource and Waste Management Department, Ramboll, Germany

12:45 What's happening on both Sides of the Channel for Waste-to-Energy?

- What's the WtE market status in France?
- What's the story of WtE success in UK?
- What's the evolution of alternative thermal treatment in UK?
- Some case studies of projects and realization in both countries

Christophe Cord'homme, Business & Products Development Director, CNIM Group, France

13:15 🍴 Lunch

III. Status Quo of Sewage Sludge Treatment

14:30 Treatment of Sewage Sludge – Introduction and Overview

- Disposal structures
- Quantities and capacities
- Treatment and disposal options for sewage sludge
- Thermal treatment technologies

Prof. Peter Quicker, Chairholder, RWTH Aachen - Unit of Technologies of Fuels, Germany

15:00 Incineration Technologies for Sewage Sludge

- Co-combustion and Mono-combustion
- Overview of P-recovery processes

Dipl.-Phys. Edmund Fleck, Managing Director, MARTIN GmbH für Umwelt- und Energietechnik, Germany

15:30 Alternative Techniques for thermal Treatment of Sewage Sludge from medium sized Sewage Treatment Plants

- Technical framework for the use of pyrolysis and gasification processes for the treatment of municipal sewage sludge
- First experiences from two projects with alternative treatment techniques in Linz-Unkel and Renningen
- Outlook on the use of alternative thermal processes taking into account the recovery of phosphorus or the use of treatment residues as fertilizer

Markus Gleis, Scientific Staff, German Environment Agency, Germany



16:00 Excursion to INDAVER and SLECO:Waste-to-Energy Plant ECLUSE

The visit is included in the registration fee. Due to organizational reasons we kindly ask our participants to register for the tour in advance. Please see the registration form on the last page. **Limited Places!**

20:00  **Get-together**

At the end of the first conference day we kindly invite you to use the relaxed and informal atmosphere for in-depth conversations with other participants and speakers.

IV. Developments in Metals and Minerals Recovery from IBA**09:00 Experiences with Carbon Capture at a CFB wood fired Boiler**

- Aim (CCU) and Design
- Startups & Experiences
- Flue gas and captured CO₂ qualities
- Business case

Dr. Jan-Peter Born, Manager Business Development WtE, N.V. HVC, Netherlands

09:30 MSWI BA Utilization in Finland – Field Experiences

- MSWI BA utilization in Finland - Latest improvements
- MSWI BA utilization in civil engineering - Road construction and concrete products
- Presenting field experiences through different types of case studies

PhD, Annika Sormunen, R&D Manager, Suomen Erityisjäte Oy, Finland

10:00 Innovative Recycling of Metal Sludges – For a higher Resource Efficiency in the stainless and special Steel Industry

- Status quo of metal sludge disposal
- The process of vacuum distillation
- From waste to resource: Increasing resource efficiency in the industry

Dr. Filipe Manjolinho Costa, CEO, CRONIMET Envirotec GmbH, Germany

10:30  Networking & Coffee Break

11:00 Solvent-based Recycling of mixed Plastics and multilayer Packaging

- Miss-Management of packaging and insufficient recycling as global problem
- Increasing recycling quotas in Europe and Germany require new, innovative recycling solutions
- Limits of conventional recycling processes
- Newcycling® - High-Value recycling of mixed plastics from post consumer and multilayer packaging
- Applications of regranulates from Newcycling®

Hagen Hanel, Head of Plastics Recycling Innovation Center, APK AG, Germany

11:30 Using community Waste to fuel local Energy for your Town

- Damage that plastic waste causes and the truth about plastic pollution and its benefits
- CTEC energy has the ability to execute a sustainable small scale Waste-to-Energy system, unlike no other
- Unique gasification technology developed by CTEC energy with ultra-clean emissions and high efficiency

Mike Burns, Chief Technology Officer and Managing Director, Clean Thermodynamic Energy Conversion Ltd., United Kingdom

12:00 Innovative Technologies in IBA Processing – Compliant Solutions for WtE Industry

- Dry and wet materials recovery solutions for IBA
- Risk management and disposal cost mitigation
- Using valuable resources in a sustainable and liable way

Dr.-Ing. André Dammschröder, Business Development Manager, Inashco BV, The Netherlands

12:30  Lunch

V. Plant Optimization**13:30 Possible upgrades for Flue Gas Treatment Systems to follow the new Waste Incineration BREF**

- Expected emission limits – WI BREF
- Examples on upgrades to meet new WI BREF
- Combination with flue gas condensation for enhanced energy recovery
- ADIOX for increased dioxin removal and minimise risk of "dioxin memory effect"
- Mercox for improved mercury removal

Per Lindgren, M.Sc., Head of Sales Department, Babcock Wilcox Vølund AB, Sweden

14:00 Steam from Waste Heat with a Qpinch chemical Heat Transformer

- Reduction of CO₂
- Turn waste heat into useful heat
- How to integrate in an industrial plant
- Low OPEX & high asset effectiveness

ir. Wouter Ducheyne, CTO & COO, Qpinch, co-author: Prof. Dr. ir. Christian Stevens, FRSC, Dep. of Green Chemistry & Technology, Bioscience Engineering at Ghent University, both: Belgium

14:30  Networking & Coffee Break

15:00 More than 20 year's Experience in very high end Mercury Capture from Sewage Sludge Incineration

- Trends of mercury and dioxins/furans regulation in the US and Europe - towards the more stringent
- Very high end mercury and dioxins/furans removal experience
- Lessons learned over 25 years of operation of kombisorbon processes

Dr. Karim Mati, R&D / Product Manager, CPPE S.A., Luxembourg

15:30 State-of-the-Art Refractory Linings for W-t-E Plants - An Overview

- Advantages and disadvantages of refractory lining systems in use for WtE plants
- SiC tile and monolithic systems; Rapid turnaround

Dr.-Ing. Tim Schmedders, Technical Manager, co-author: Dipl.-Ing., Viktor Klaus, Managing Director, Dipl.-Ing., Denis Boskovic, Project Manager, all: Züblin Chimney and Refractory GmbH, Germany

16:00 Conference chair's closing remarks

16:15 End of conference

International VDI Workshop

Digital Transformation and the Recycling Industry

Workshop Chair:

Jan Pannenbäcker, CEO, schrott24 GmbH, Austria

Date and Venue:

April 11, 2019
Antwerpen

Time:

10:00 - 16:00

Content

"Uber, the world's largest taxi company, owns no vehicles. Facebook, the world's most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory." Ford sells 20 times more cars than Tesla, but is considered a less valuable company. Something is happening.

We see most of these developments coming from B2C markets and slowly fading into B2B. While the recycling industry hasn't seen a lot of digitalization activities yet, there are signs that this is about to change. An increasing distribution of powerful technology combined with increasingly tighter and faster connections and networks between humans, organizations and things makes space for innovation to happen. At an accelerated pace business models, value chains and eventually whole industries are transformed. Industry leaders cannot rely on their dominance anymore and even young innovators with little resources have the opportunity to build something with profound impact.

This workshop is a hands-on course on how to structurally turn ideas into business models and validate these in order to turn them into viable business opportunities. It's an introduction to startup and innovation methodologies that allow to get ideas on the road, test within hours or days and show how to iterate in order to get to product-market fit.

Kick-off

- Overview of some general trends
- Case studies of industry transforming business models
- Developments in the recycling industry

Interactive Workshop

Highly interactive hands-on session with Business Model Canvas and other innovation methodologies

3rd International VDI Conference 2019

Sewage Sludge Treatment

Date and Venue

April 9 – 10, 2019 in Antwerp, Belgium

- Implications of EU Legislation and Policy
- Current Technology on (energetic) Recovery of Sewage Sludge
- Ressource Recovery from Sewage Sludge
- Recent Developments of international Markets
- New Insights on Thermal Treatment of Sewage Sludge

www.vdi-international.com/06K0906019

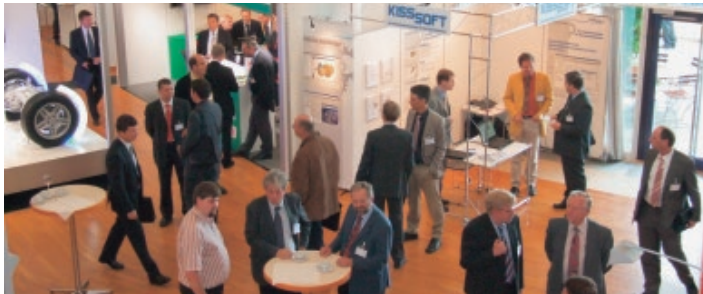


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If you want to meet with and reach out to the first-rate experts attending this VDI conference and to powerfully present your products and services to the well-informed community of conference participants, please contact:

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Become a speaker

Become a speaker at our international VDI Process Industry Conferences. Make yourself known in the industry and discuss best practice examples with other international experts. We are looking for speakers on: Digitalization, Maintenance, Artificial Intelligence.

Please submit your topic to:
Sam Sharifian Pour
Product Manager International Business
Phone: +49 211 6214-621
Email: sharifianpour@vdi.de

Registration

Terms and Conditions

Registrations: Registrations 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 have received our invoice and its invoice number to be stated for transfer. Belgian VAT directives apply. Please state your VAT-ID with your registration.

Conference venue

Crowne Plaza Antwerp
A. Gerard Le Grellelaan 10
2020 Antwerp, Belgium
Phone: +32 3 259 75 00
Email: info@cpantwerp.com



You will find more hotels
close to the venue at
www.vdi-wissensforum.de/hrs

Hotel room reservation: A limited number of Rooms has been reserved for the Benefit of the conference participants at the Crowne Plaza Antwerpen. 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 Get-together on April 9, 2019.

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 Belgian 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 program 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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Energy and Materials from Waste



Register online!

www.vdi-international.com/06K0959019



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Yes, I will participate as follows:

Participation Fee + VAT

VDI Conference 09.-10.04.2019
(06K0959019) € 1490

and/or

Workshop 11.04.2019
(06ST907001) € 950

and/or

Package Price (Please tick the boxes)

(Conference + 1 Workshop) € 2190

Tour to INDAVER and SLECO Joint Venture Waste-to-Energy Plant ECLUSE - (registration necessary - limited places, only possible in combination with the conference Registration)

I am interested in sponsoring and/or exhibition

Participation Fee VDI-Members* Save 50 for each Conference Day.

* For the price category 2, please state your VDI membership number
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