

International Conference & Exhibition

NITROGEN + SYNGAS

2011

21-24 February 2011 > Hilton Düsseldorf, Germany

The leading annual event for the nitrogen fertilizer and other syngas-based industries

- Synthesis gas regeneration
- Ammonia operations, technology, revamps and catalysts
- Urea operations and technology
- Methanol technology
- Nitric acid and nitrates
- Nitrogen fertilizer finishing



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NITROGEN+SYNGAS 2011

The nitrogen market appears to have sailed into calmer waters after the upheavals of the crisis and the ensuing recession. Urea prices have advanced fairly steadily since the mid year, signalling the return of a certain amount of confidence. For the next few months, at least until the massive Qafco V project starts up, there is nothing to suggest any impending disturbance of the market balance.

Now that the bubble in capital costs has subsided, and with rising gas costs in prospect in the longer term, there is once again keen interest in improving energy efficiency, (through hardware improvements, process control or better operating practice) and in feedstock substitution. The market for revamping work reflects that. Some operators face the need to curb NOx from their furnaces and boilers. For some nitrates producers, nitrous oxide and its global warming potential is an acute concern. And in the new plants market the relentless drive towards ever bigger single-train facilities continues.



You will have the chance to hear presentations on these and a variety of other topics at Nitrogen+Syngas 2011.

Who should attend?

- Plant Operation and Maintenance
- Plant Construction
- Process Design and Engineering
- Technology Licensing
- Catalyst and Auxiliary Chemicals Supply
- Planning and Strategy
- Sales and Marketing
- Purchasing
- Project Finance

AGENDA

Monday 21 February

- 15:00 – 20:00 **Registration opens** sponsored by  **Global Toyo**
TOYO ENGINEERING CORP
- 15:00 – 20:00 **Exhibition opens**
- 18:30 – 20:00 **Welcome Reception** sponsored by  **Schmidt + Clemens Group**

Tuesday 22 February (Plenary sessions)



- 08:30 **Welcome coffee** sponsored by  **Stamicarbon**
pure knowledge
- 09:00 **Conference opens**

Session 1: Market influences




- 09:05 **Natural Gas Outlook**
(to be confirmed)
- 09:35 **Nitrogen Overview**
A. Prince (CRU Analysis)
- 10:05 **Global Methanol Market outlook**
J. Jordan (Jim Jordan & Associates)
- 11:05 **Coffee break** sponsored by  **Stamicarbon**
pure knowledge

Session 2: Methanol technology Ready for the 10,000-t/d plant

- 11:40 **Methanol technology – The bespoke approach**
L. Taylor (Johnson Matthey Catalysts)
- 12:05 **Realizing the 10,000-t/d single-stream methanol plant**
(provisional title)
P. di Zanno (Lurgi GmbH)

- 12:30 **The global methanol market in transition – Challenges in catalyst technology**
N. Ringer (Süd-Chemie AG)
- 12:55 **MK 151 Fence – A new catalyst for more cost-effective methanol plants**
K. Svennerberg (Haldor Topsøe A/S)
- 13:20 **Lunch** sponsored by  **Johnson Matthey Catalysts**  **Udde**
ThyssenKrupp
Udde GmbH, UFT, UHPT

Session 3: Ammonia operations and technology

- 14:35 **Flawless project development**
J. Camps (Jacobs Engineering Consultants)
- 15:00 **Operator training simulators in ammonia plants: Increasing safety, decreasing cost, strengthening competitiveness**
K. Schübel (SKW Stickstoffwerke Piesteritz GmbH)
- 15:25 **Qafco's experience in the application of DeNOx technologies on combustion gases**
U. Desai (Qatar Fertilizer Co.)
- 15:50 **Coffee break** sponsored by  **Stamicarbon**
pure knowledge
- 16:20 **Low-energy consumption ammonia production – Baseline energy consumption; options for energy optimization**
K. Noelker (Udde GmbH)
- 16:45 **Casale coal-based ammonia and methanol synthesis loops**
P. Moreo (Ammonia Casale SA)
- 17:10 **Drinks reception**
Co-sponsored by  **QUEST**
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AGENDA

Wednesday 23 February (Parallel Sessions)

STREAM A

- 08:30 Registration opens *sponsored by*
08:30 Exhibition opens
08:30 Welcome coffee *sponsored by*



Session 4: Ammonia revamps and catalysts

- 08:50 **KRES-ES™ revamp makes more ammonia from less natural gas by energy substitution**
S. Singh (*KBR, Inc.*)
- 09:15 **Excellence achieved at NFCL**
R. Raghavan (*Nagarjuna Fertilizers & Chemicals Ltd*)
- 09:40 **Rejuvenating a 27-year-old ammonia plant**
S.I.A. Kirmani (*Fauji Fertilizer Co.*)
- 10:05 **Revamp of JSC Cherkassy Azot's ammonia plant for energy savings and capacity increase**
P. Han (*Haldor Topsøe A/S*);
V. Sklyarov (*JSC Cherkassy Azot*)
- 10:30 **Coffee break sponsored by**
- 11:00 **The science of catalysis:
The chemistry within your catalysts**
P. Broadhurst (*Johnson Matthey Catalysts*)
- 11:25 **Safe operation of HT shift catalyst – Best practices in case of WHB leaks and catastrophic failures**
T. Archer (*Süd-Chemie, Inc.*)
- 11:50 **Improving the operation of ammonia synthesis loops**
Y. Kamal (*Johnson Matthey Catalysts*) M. Abdel Aaty (*MOPCO*)
- 12:15 **Lunch sponsored by**



Session 6: Nitric acid and nitrates

- 13:35 **Abatement of N₂O from nitric acid plants in the context of emissions trading – A continuing concern for the fertilizer industry**
M. von Welsen-Zerweck (*N-Serve Environmental Services GmbH*)
- 14:00 **The development and applications of tertiary alloys for ammonia oxidation**
I. Bunch (*Johnson Matthey Noble Metals*)
- 14:25 **Heraeus experience and developments for N₂O emission reduction**
T. Keller (*W. C. Heraeus GmbH*)
- 14:50 **Coffee break sponsored by**
- 15:20 **MKSprecise: A singular catalyst solution and the cost drivers behind it**
K. Burchard (*Umicore*)
- 15:45 **Development of integrated ammonium nitrate complexes**
K. Ruthardt (*Uhde GmbH*)
- 16:10 **Prozap's experience in N₂O/NO_x control and a re-invented nitrogen fertilizer: liquid calcium nitrate**
M. Skorupka (*Prozap Engineering Ltd*)
- 16:35 **Start-up of the world's biggest UAN plant**
R. Schallert (*Uhde GmbH*)
- 17:00 **End of session**



STREAM B

- 08:30 Registration opens *sponsored by*
08:30 Exhibition opens
08:30 Welcome coffee *sponsored by*



Session 5: Nitrogen fertilizer finishing procedures

- 09:15 **Jumbo single-line urea granulation plants – Ready for implementation**
M. Potthoff (*Uhde Fertilizer Technology bv*)
- 09:40 **Rotoform pastillation in the fertilizer finishing process**
K. Swamy (*Sandvik Process Systems*)
- 10:05 **Technical upgrading of a low-rise prilling tower – Case study of JSC Salavatnefteorgsintez**
N. Cheblakov (*NIIK – Urea Research and Design Institute*)
- 10:30 **Coffee break sponsored by**
- 11:00 **Benefits of the new Coperion Bulk -X-Change® for cooling fertilizers**
H. Nigsch (*Coperion GmbH*)
- 11:25 **The influence of screening processes in fertilizer production**
O. Pickard (*Rhewum GmbH*)
- 11:50 **Vortex granulation: the new route to high-quality solid nitrogen fertilizers**
F. Zardi (*Urea Casale SA*)
- 12:15 **Lunch sponsored by**



Session 7: Urea operations and technology (I)

- 13:35 **Saipem's breakthrough in large-scale ammonia-urea plants**
A. Gianazza (*Saipem*)
- 14:00 **Sirius@Max: A new approach for urea plant optimization using advanced process control**
L. Dieltjens (*Stamicarbon*); C. Moons (*IPCOS*)
- 14:25 **Toyo's approach to environmental protection in urea plants**
G. Nishikawa (*Toyo Engineering Corporation*)
- 14:50 **End of session**
- 14:50 **Coffee break sponsored by**



AGENDA

Thursday 24 February (Plenary sessions)

- 08:30 **Registration opens** *sponsored by*
08:30 **Exhibition opens**
08:30 **Welcome coffee** *sponsored by*



Session 8: Synthesis gas generation and other products

- 09:05 **Nano-technology for substantial material improvement: Centralloy® G 4582 Micro R for steam reformers**
D. Jakobi (*Schmidt + Clemens*)
- 09:30 **Enhanced steam reformer tube inspection and remaining life assessment methodologies**
R. Roberts (*Quest Integrity Group*)
- 09:55 **Improving metal dusting resistance in the synthesis gas environment with the new Sumitomo 696 Ni-based alloy**
S. Kurihara (*Sumitomo Metal Industry Ltd*)
- 10:20 **Coffee break** *sponsored by*
- 10:50 **Microchannel reactors for the small-scale production of synthesis gas**
D. Atkinson (*Oxford Catalysts Ltd / Velosys, Inc.*)
- 11:15 **Improved efficiency for hydrogen plants**
T. von Trotha (*Uhde GmbH*)
- 11:40 **Accurately monitoring the temperature of catalyst beds with CatTracker®**
E. Heidt (*Daily Thermetrics*)
- 12:15 **Lunch**



Session 9: Urea operations and technology (2)

- 13:35 **Economics of third-generation alloy protection**
J. Visser (*Stamicarbon*)
- 14:00 **Revamping of a total recycle urea solution plant to increase capacity and energy-efficiency**
P. Orphanides (*Orphanco*)
- 14:25 **An improved technique for lining high-pressure urea strippers with reactive metals**
P. Mantovani (*Officine Luigi Resta SpA*)
- 14:50 **Urea and nitric acid plants: Improving shut-down, revamping, debottlenecking and refurbishment**
J-M Sluyters (*Gemaco*)
- 15:15 **Using DP28™ to reduce passivation in urea plants**
M. Takahashi (*Toyo Engineering Corporation*)
- 15:40 **Closing remarks**
- 15:45 **Close of conference**



VENUE



Düsseldorf dazzles with boundary-pushing architecture, zinging nightlife and an art scene to rival many larger cities. It's an elegant and modern city that seems all business at first glance: banking, advertising, fashion and telecommunications are among the fields that have made Düsseldorf one of Germany's wealthiest cities. However, after work locals and visitors can relax and enjoy nightlife in the Old Town, visit Düsseldorf's renowned shopping area or enjoy the city's art scene.

The conference hotel is just 5 minutes' drive from the airport and Old Town. When you have some free time, you can also relax onsite with the sauna, solarium and saunarium; enjoy health club or work out in the 24-hour gym.

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Prozap, *Poland*

Quest Integrity Group, LLC, *USA*

R&D Institute of Urea, *Russian Federation*

Rotex Global, *Belgium*

Rheum GmbH, *Germany*

Sandvik Materials Technology, *Sweden*

Sandvik Process Systems, Div of SMT, *Germany*

Schmidt & Clemens Group, *Germany*

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Solex Thermal Science Inc., *Canada*

Stamicarbon bv, *The Netherlands*

Süd Chemie AG, *Germany*

Toyo Engineering, *Japan*

Uhde GmbH, *Germany*

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CONFERENCE INFORMATION

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