Syngas | Ammonia | Urea | Nitrates | Methanol | GTL | Hydrogen

Middle East Nitrogen + Syngas 2019

27-29 October • Sheraton Oman, Muscat, Oman

Maximising efficiency through innovation and knowledge sharing

Why you should attend:

- Share operational experience and best practice
- Expand your technical knowledge
- Develop solutions to operational problems
- Discover new technical advances that:
  - enhance operational efficiency
  - improve environmental compliance
- "Ask the expert" in the world-class exhibition
- Understand key market drivers

Who should attend:

- Plant managers and superintendents
- Process engineers
- Maintenance engineers
- Mechanical engineers
- Plant operations
- Technology procurement
- Environmental, health and safety engineers

For more information, or to book your place, visit: **www.middleeastnitrogen.com**

Supported by:

Oman India Fertiliser Co. | OMIFCO

Operator Rate just $500

Official Publications:

CRU FERTILIZERWEEK

nitrogen+syngas

Supporting Publication:

WORLD FERTILIZER MAGAZINE

CRU | 50 YEARS 1969-2019

#CRUmenitrogen

What to expect

Drawing on the experience of the highly successful Nitrogen + Syngas conference portfolio, CRU is pleased to launch this new regional event, devoted to developing technical excellence across the nitrogen and syngas value chain.

Delegates attending **Middle East Nitrogen + Syngas** will benefit from a mix of training seminars, workshops and technical papers covering the following areas:

- New technology and materials innovations
- Maximising reliability and productivity
- Ensuring environmentally sustainable production
- Exploring options for diversification and integration
- Utilising process analysis and measurement to improve performance
- Effective reformer management

In addition to these key technical themes, the event will feature several high-level strategic presentations, including analysis from CRU's Nitrogen team, exploring the supply and demand scenario for the global nitrogen market.

Get the **CRU view** on the global nitrogen market

Networking
Ample time is factored into the three-day agenda to allow you to meet with key contacts

Exhibition
25+ exhibitors and technical experts are ready to discuss your operational challenges. They can offer practical solutions, utilising new technology, process, equipment, and materials

Operators pay just $500

Sunday 27 October

08:00 **Registration open**

09.00 until 17.30

Steam Methane Reformer advanced training course

Hosted by 3D Energy Systems

The Steam Methane Reformer advanced training course is designed for all plant personnel working with steam reformer plants. The course will provide you with practical advice and enable you to better manage the specific operating and maintenance issues you face on a daily basis.

Workshop objectives:

The training course is directed toward improving the level of understanding among plant management, engineers, operators, maintenance, and HSE personnel. You will gain knowledge on the course and practical tips which will enable you to make better decisions on how to manage the specific operating and maintenance issues you face on a daily basis, how to coordinate your efforts to achieve the best long-term performance of critical equipment, and to identify opportunities and best available technologies (BAT) for improvements.

Workshop Contents:

Process Review
- Ammonia history
- Plant sections
- Material balances
- Required information
- Steam verification
- Plant balance
- Use of infrared thermography
- Plant meters
- Reducing pressure drop
- Cooling water

Steam Reformer Furnace
- Radiant section design & applications
- Steam reformer applications
- Steam reformer arrangements
- Catalyst tubes and outlet system
- Steam reformer equipment technologies
- Operation and maintenance controls and safety systems
- Typical operating and maintenance issues
- Steam reformer retrofit options
- Inspection best practices
- Start-up
- Normal operation and emergency and upset conditions

Who will benefit from attending?

Plant Management, Engineering, Operations, Reliability, Maintenance and Health, Safety & Environmental personnel in Ammonia, Methanol, Hydrogen, GTL and Ore Reduction (DRI) plants that require Steam Reformer furnaces for generation of hydrogen, synthesis as or reducing gas

13:00 **Exhibition open**

18:00 **Welcome reception**

Monday 28 October

08:00 Registration open
Exhibition open

Opening keynote session

09:00 **Welcome address**
Presenter to be confirmed, **OMIFCO**

09:20 **What is the outlook for nitrogen in light of geopolitical and economic uncertainty?**
- How do future nitrogen investments compare against regional geopolitical risks?
- What is driving nitrogen demand fundamentals and where will growth be centred?
- How will traditional Arab Gulf exporters adapt to changing trade flows?

Laura Cross, Principal Analyst, Nitrogen, **CRU**

10:00 **Exploring the opportunities for methanol producers**
Presenter to be confirmed

10:30 Networking break

Optimising profitability via product diversification and complex integration

11:15 **Integrated complexes for the production of ammonia, urea, nitric acid and solid fertilizers**
Francesco Baratto, **Casale SA**

11:45 **AdwinCombined™, a striking innovation for the coproduction of methanol and ammonia**
Vaios Kitsos, **thyssenkrupp Industrial Solutions**

12:15 Networking lunch

Materials and equipment developments

14:00 **Safurex equipment supply**
Roel Trijnes, **Stamicarbon**

14:30 **Identifying problems and developing solutions in HP equipment**
Robert Bunzl; Filippo Colucci, **Schoeller-Bleckmann Nitec GmBh**

15:00 **The importance of Pigtails and their material selection in steam reforming**
Barinder Ghai, **Sandvik**

15:30 Networking break

Ensuring environmentally sustainable production

16:15 **Primary N_2O emission reduction in catalytic ammonia oxidation process: Results from testing new materials**
Natalia Borisova; Alexander Dyukov, **Krastvetmet**

16:45 **An innovative solution for wastewater treatment in fertilizer complexes**
Alberto Serrafero, **Saipem**

17:15 Close of day two

Tuesday 29 October

08:00 **Registration open**
Exhibition open

Maximising performance and reliability

09:00 **State-of-the-art steam reforming technology**
Christian Berchthold, **Clariant**

09:30 **Improvements to water gas shift process**
Adnan Abdulkarim, **Johnson Matthey**

10:00 **Single stream 6000 MTPD ammonia plant using KBR's Purifier™ based technology**
Girish Patel, **KBR**

10:30 **Lean Duplex SAF2304 a solution for heat exchanger tubings in ammonia condensers and coolers**
Barinder Ghai, **Sandvik Materials Technology**

11:00 **Networking break**

Maximising the effectiveness of your reformer

11:30 **Optimising down-fired SMR performance utilising improved tunnel design**
Daniel Barnett, **BD Energy Systems;**
Jeffrey Bolebruch, **Blasch Precision Ceramics**

12:00 **Maximise reforming capacity with integrated chilling**
VK Arora, **Kinetics Process Improvements (KPI)**

12:30 **Update on leading CATACEL SSR system applications**
John Brightling, **Johnson Matthey**

13:00 **Networking lunch**

Improving operational performance through enhanced process analysis and measurement

14:30 **Steam reformer tube wall temperature measurement theory and technology**
James Cross, **AMETEK[ºº] Land**

15:00 **Finite element analysis of double cone metal gasket in the ammonia reactor**
Radoslaw Sieczkowsi; et al, **SPETECH**

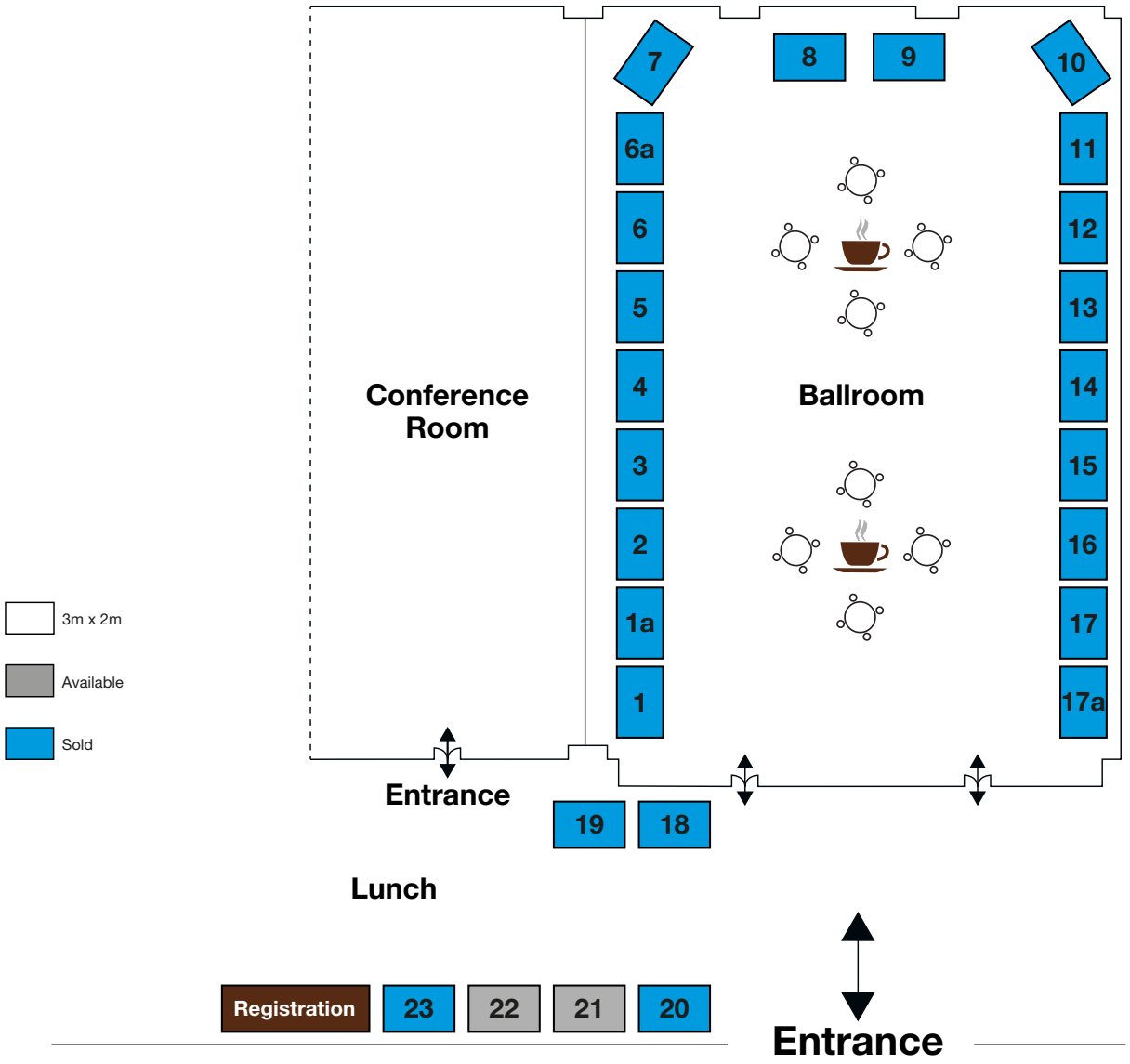
15:30 **Optimise syngas production via process analysis as a key process control enabling technology**
Peter van Vuuren, **SpectraSensors**

16:00 **Close of conference**

Praise for Nitrogen + Syngas 2019 conference in Berlin:

"An excellent opportunity to meet and share your plant and business issues with people of varying expertise who can advise and help on these issues."

Israr Haque, Chief Scientist, **Sabic**



Exhibitor List

Stand	Company
1	Schoeller-Bleckmann Nitec GmbH
1a	Manoir Industries
2	BD Energy Systems
3	Zwick Armaturen GmbH
4	CellMark Chemicals
5	SPETECH
6	Stamicarbon
6a	GEMACO PIPING SA
7	Telus Applications for Industry
8	Kinetics Process Improvements, Inc
9	Greens Combustion
10	Christy Catalytics
11	Schmidt + Clemens Group
12	LISEGA SE
13	Prozap Sp z.o.o.
14	TMS 2bv
15	Casale
16	Magnetische Prüfanlagen GmbH
17	Protomation bv
17a	SAIPEM
18	Clariant
19	UNIDENSE® Technology GmbH
20	Umicore AG & Co.KG
21	**AVAILABLE**
22	**AVAILABLE**
23	BCInsight Ltd

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Yes! Book my place at **CRU's Middle East Nitrogen + Syngas Conference 2019**

Delegate Fees	USD $
Until 27 September 2019	$1250
From 28 September 2019	$1500

Operator Rate just $500

Do you work in a management, operations or engineering role at an ammonia, methanol, urea, nitrates, hydrogen or syngas facility? If so, you could be eligible for the special operator rate of just $500.
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3 easy ways to register

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Praise for Nitrogen + Syngas 2019 in Berlin:

"Nitrogen + Syngas is the most valuable showroom for sharing and finding innovative technological solutions for the fertilizer industries."

Jacopo Cedrati, Process Engineer, **Saipem**

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