Specific Process Safety Risks in Ammonia and Urea plants
- Identification and assessments tools -

3 days training course
19 – 21 June 2019
Amsterdam, the Netherlands
Mr. Dan Cojocaru
Chartered Chemical Engineer
Registered Professional Engineer of Queensland
Founder of AmmoniaKnowHow.com
17 years operation and engineering experience in ammonia projects developed in Germany, Vietnam, Egypt, Saudi Arabia, Romania, Algeria, Slovak Republic and Russia.
Expert: Ammonia process, commissioning, startup, process safety

Mr. Mark Brouwer
Chemical Engineering, University of Technology Eindhoven, The Netherlands
Safety for Engineers, postgraduate continuing professional education Heerlen, The Netherlands
7 years ethylene plant DSM (revamp projects, safety)
14 years Stamicarbon (revamp projects, services, hardware supply)
Founder of UreaKnowHow.com (March 2009)
Learn to identify, assess and communicate process safety risks in Ammonia and Urea plants

This course examines the causes and prevention of ammonia and urea incidents. It categorises the key hazards which must be controlled and reviews in detail the most common hazards associated with ammonia and urea plants.

The course draws upon the past industry accidents and incidents, as well as errors in design, only revealed in operation. You will gain an understanding of the key operation, maintenance and plant modification aspects which must be controlled to ensure safe operation of ammonia and urea plants.

Effective risk assessment is fundamental to protecting businesses against the potentially devastating impact of process safety incidents; in most countries it is also a legal requirement.

This course describes the processes used to identify, assess and communicate process risks from a safety, environmental or business perspective, from a simple qualitative approach to fully quantified assessments, together with the demonstration that risks are as low as reasonably practicable.

You will better understand the principles of inherent safety and their application to existing facilities. This practical course uses real-life examples that can help establish a safer, more efficient and more profitable plant.

Day 1 – Risk identification and assessment tools

Module 1: Hazard identification and risk management for operation plants

- Risk Management Process
- Inventory of Health & Safety hazards within Fertilizer plant activities
- Hazards identification and assessment studies and techniques (HAZID/HAZOP)
- Risk ranking using a risk matrix
- Risk assessment guidelines and procedures (ALARP demonstration)

Module 2: Using lessons learned from past incidents in Ammonia and Urea plants

- FIORDA Incident Database for Ammonia Plants
- FIORDA Incident Database for Urea Plants
- Sections and Equipment with most Safety Hazards in Ammonia Plants
- Sections and Equipment with most Safety Hazards in Urea Plants
Module 3: Key findings and recommendation for Ammonia and Urea hazards

- Key findings and recommendations in safety studies for Ammonia plants
- Key findings and recommendations in safety studies for Urea plants

Risk Assessment (Workshop)

- Risk assessment workshop based on case studies from Ammonia plants
- Risk assessment workshop based on case studies from Urea plants

Day 2 – Specific HSE risks for Urea plants

Module 1: The Lessons Learned from the First 100 Safety Hazards in Urea Plants

- Incident Database, Risk Registers for Urea Plants
- Sections and Equipment with most Safety Hazards
- Major Safety Risks in Urea Plants
- Health concerns related to ammonia, CO2, urea, UF85, ammonium carbamate
- Consequences how to behave in a urea plant?
- Consequences for doing HAZOP studies
- Risk assessment workshop based in a case study

Module 2: Explosion Risks (Workshop)

- Theory of explosive mixtures and explosion diagrams
- Going through the plant in Stamicarbon and Saipem
- Explosive Risks during shut-down, start-up, blocking-in, Turnarounds

Module 3: Environmental Management for Urea Plants

- Air emissions & noise
- Wastewater
- Hazardous waste
Day 3 – Specific HSE risks for Ammonia plants

Module 1: Incidents and corrective actions in Ammonia plants

- Case studies for incidents in Reforming section of Ammonia plants
- Case studies for incidents in HT and LT shift convertors
- Case studies for incidents in CO2 removal section of Ammonia plants

Module 2: Incidents and corrective actions in Ammonia plants

- Case studies for incidents in Methanation section of Ammonia plants
- Case studies for incidents in Synthesis section of Ammonia plants
- Case studies for incidents in Ammonia Storage tanks

Examination

Additional Training courses for Ammonia industry:

5-day Ammonia Advance Training program for operators, supervisors, engineers and managers – 24 -28 June 2019, Amsterdam, the Netherlands

Additional Training courses for Urea industry:

5-day Urea Training program for Urea Managers, Engineers and Shift Supervisors
**Dates**

19-21 June 2019

**Location**

NH CARANSA Hotel, Rembrandtplein, Amsterdam, Netherlands

**Fees**

**EUR 2,450**, -- excl. VAT (if applicable, normally only for UK companies)

**Discounts**

Discounts are available to companies booking more than one place:

- Early bird discount before December 2018 - **10% discount**
- Group discount for 4 or more places - **10% discount**

Multiple places must be booked at the same time to qualify.
Cumulative discount applicable (early bird + group discount).

**Accommodation**

Accommodation is not included in the delegate fee. If you need any help with booking a hotel, we will provide contact details for hotel reservation.

**Contact**

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