FERTILIZER ACADEMY

Author / Trainer:

Mark Brouwer

Process & Safety Engineer,
Urea Expert

Mark has over 25 years of licensing, revamping, engineering and consultancy experience in urea projects. He has been visiting more than 100 urea plants located in almost all continents.

Mark has experience in all project phases starting from Concept and Front End Engineering (FEED) through Commissioning and Operation. He is a Master of Chemical Engineering, Post Bachelor in Safety for Engineers, Marketing and Business Strategy Courses at the Rotterdam School of Management and a Member of American Institute of Chemical Engineers (AICHE).

Mark has extensive experience in revamp studies, engineering and process safety consultancy services to EPCM companies and urea plants including the preparation of Revamp and Plant Assessment and Safety Reports, hazard identification and analysis, troubleshooting, risk registers, corrosion inspections, procurement services, training services, etc.

Mark's expertise are Process technology, Corrosion, Licensing, Engineering, Revamping, Marketing, Sales, Contract negotiations, Troubleshooting, Project Management, International business, Safety, high pressure urea valves, high pressure urea equipment.

Mark has provided extensive training programs to more than 1000 urea engineers, managers, (shift)supervisors and operators from all over world.

Mark has published numerous technical papers in reputable industry magazines and presented at numerous CRU Nitrogen & Syngas and AICHE Ammonia Safety Conferences.

Course title:

Best Practices for High-pressure Valves in Urea Plants

Introduction:

This training course will discuss the challenges high pressure valves face and its consequences for the choice of materials of construction. What are the typical features of high pressure control and manual valves and its best practices in design, installation, operation and maintenance. Further several troubleshooting and safety incident cases will be discussed in detail.

Course outline:

Module 1: High-pressure valves (duration 1hr)

1. Challenges high-pressure valves
2. Materials of construction high-pressure valves
3. Typical features high-pressure control and manual valves
4. Best practices in:
    - Design
    - Installation
    - operation
    - maintenance

Module 2: Cases (duration 1hr)

1. Flange leaks
2. Weephole leaks
3. Stuffing box leaks
4. Butterfly valve incidents
5. Non return valve incidents
6. Control valve incidents
7. Sampling valve incidents
8. Recommendations

Learning Outcomes:

By the end of this course you will understand:

- The various challenges high-pressure valves face and its consequences for the choice of materials of construction.
- The typical features of high pressure control and manual valves.
- The best practices in design, installation, operation and maintenance.
- Lessons learned from several troubleshooting and safety incident cases.
- In which plant section explosion risks are present
- What measures one can take to prevent and mitigate explosions.
- In which plant sections where explosion risks exist and why
- Which upset conditions and incidents can create explosion risks.

Who will benefit:

Anyone who is involved in the design, engineering, operation and maintenance of any urea plant including marketing, sales, business development of urea production technologies or production equipment and valves including:

- Engineers and Managers
- Operations
- Maintenance
- Marketing and Business Development Managers
- Safety, Health and Environmental Managers

Course materials:

- Hand Out Presentations in pdf format
- Several background Technical Papers

Price:

€ 300

Discounts:

- 2 places – 10% discount
- 3 places – 15% discount
- 4 or more places – 20% discount.

In-company training:

This course is also available as an in-company course (face-to-face or online) where content can be customised to meet your organisation's specific needs and delivered on a date/location that suits your requirements.

Contact us for more information.

Training code: UREA07