



Nitric Acid / Ammonium Nitrate Plants – Failure Prevention

Potential PDH: 16

Description:

Training Module Description

- N1 Nitric Acid Plants overview
- N2 Ammonia Vaporisation, Air Compression & Heating
- N3 Conversion & Heat Train
- N4 Cooling, Condensation, Absorption & Bleaching
- N5 Tail Gas & NOx Emission Control
- N6 Acid Storage
- N7 Ammonium Nitrate Plants overview
- N8 Ammonia Evaporation & AN Synthesis
- N9 Concentration, Prilling, Conditioning & Scrubbing
- N10 Process Steam & Condensate

Outline:

- Overview of Nitric Acid Plants & Corrosion Mgt
- Integrity Mgt of equipment in the Vaporisation, Compression & Heating Loops
- Integrity Mgt of equipment in the Conversion & Heat Train Loops
- Integrity Mgt of equipment in the Cooling, Condensation & Absorption Loops
- Integrity Mgt of equipment in the Tail Gas & NOx Emission Loops
- Integrity Mgt of equipment in the Acid Storage Loop
- Overview of Nitric Acid Plants & AN Safety Mgt
- Integrity Mgt of equipment in the Evaporation & AN Synthesis Loops
- Integrity Mgt of equipment in the Concentration, Prilling, Conditioning Loops
- Integrity Mgt of equipment in the Process Steam & Condensate Loops

Who Should Attend:

The *Nitric Acid / Ammonium Nitrate Plants – Failure Prevention* training is designed for professionals involved in the operation, maintenance, engineering, and management of nitric acid and ammonium nitrate production facilities. Ideal attendees include plant operators, technicians, maintenance and process engineers, reliability engineers, inspection and corrosion specialists, as well as plant managers, supervisors, and HSE managers. This training provides valuable insights into failure mechanisms specific to these plants, equipping attendees with skills in identifying risks, implementing prevention strategies, and enhancing plant safety, reliability, and productivity to minimize downtime and ensure safe, efficient operations.

BECHT LEARNING AND DEVELOPMENT

Course Content



Page 2 of 2

Subject Matter Expert (SME):

David Keen is a qualified Metallurgist with over 45yrs domestic and international experience in fertilizer and explosives manufacturing facilities across 12 countries globally. These facilities include Ammonia, Urea, Nitric Acid, Sulphuric Acid, Phosphoric Acid, Ammonium Nitrate, Fertilizer plants and Steam Generation utilities. David is a Subject Matter Expert (SME) on equipment integrity management and has in recent years downloaded this knowledge into a series of training modules focused on preventing equipment failures through experiential learning and team problem solving sessions.

