CORE CONCEPT

Sulphur Handling Course: Degassing, Forming, Storage and Ship Loading

20 – 24 September 2027
London - Central London four-star

Sulphur Handling Course: Degassing, Forming, Storage and Ship Loading

Ref: 1945_28962 **Date:** 20 – 24 September 2027 **Location:** London - Central London four-star **Fees:** 23000 SAR

Introduction:

Sulphur handling, covering degassing, forming, storage and ship loading, is a 1-week course for pit, forming unit, sulphur yard and export berth staff that ends with a Sulphur Handling and Export Operating Plan. Facilities lose saleable tonnage and face toxic gas, fire and dust explosion events when residual H2S builds up in pit vapour space, formed product breaks into fines, stockpiles smoulder and conveyors spread dust onto ships. Nominees already work with molten or solid sulphur and learn through inspection walkthroughs of pit, forming, yard and berth layouts. CoreConcept Training Center delivers this sulphur handling course.

Course Objectives:

- Trace the elemental sulphur chain from condenser rundown to vessel hold and set handling targets for temperature, residual H2S and product quality at each transfer point
- Operate liquid sulphur degassing, pit sweep air and steam-jacketed transfer lines to keep residual H2S and pit vapour below flammable and toxic limits
- Run granulation, pastillation, prilling and slating units to deliver formed sulphur within shape, size, friability and moisture targets
- Control block pouring, stockpile building, remelting and reclaim so stored sulphur keeps its grade and does not ignite or wash out
- Apply NFPA 655 based dust, static and fire controls to sulphur conveyors, transfer towers, shiploaders and vessel holds
- Prepare a Sulphur Handling and Export Operating Plan for a case facility from walkthrough findings

Target Audience:

- Field operating staff responsible for sulphur pits, rundown seals, degassing units and molten sulphur loading arms
- Forming unit operating staff responsible for granulators, pastillators, prill towers and screening of formed product
- Sulphur yard staff responsible for block pours, stockpiles, reclaimers, remelters and yard conveyors
- Export berth and terminal operating staff responsible for shiploaders, hold trimming and cargo documentation
- Shift supervision staff responsible for sulphur area permits, fire watch and handover between crews
- Laboratory and quality staff responsible for sampling formed sulphur and issuing product certificates

Course Outline:

Day 1: Elemental Sulphur Product Chain and Site Handling Baseline

- Sulphur Rundown Seal Legs and Condenser Outlet Conditions
- Molten Sulphur Viscosity Curve and Steam Tracing Temperature Window
- Dissolved H2S and Polysulfane Release Behaviour in Liquid Sulphur
- Liquid, Formed, Block and Remelted Sulphur Product Routes Compared
- Site Sulphur Balance Survey From Pit to Berth

Day 2: Liquid Sulphur Degassing, Pit Design and Molten Transfer

- Catalysed Degassing by Spraying, Stripping Air and Bubble Column
- Residual H2S Specification Testing After Degassing
- Concrete Pit Sweep Air, Vapour Eductors and Lining Inspection
- Steam-Jacketed Pumps, Valves and Transfer Line Freeze Recovery
- Molten Sulphur Tank Truck, Railcar and Marine Loading Arms

Day 3: Sulphur Forming Units and Formed Product Quality

- Drum and Fluid Bed Granulation Seed Recycle and Layering
- Steel Belt Pastillation Drop Formers and Belt Cooling Water
- Wet and Air Prilling Towers With Prill Dewatering
- Slating Belt Operation and Legacy Flake Product Handling
- Formed Sulphur Size Distribution, Friability, Moisture and Ash Testing

Day 4: Storage, Sulphur Dust Explosion and Fire Control

- Poured Block Vat Building and Block Breaking for Reclaim
- Formed Sulphur Stockpile Stacking, Covering and Runoff Acidity Control
- NFPA 655 Dust Explosion Prevention for Sulphur Conveyors and Towers
- Static Bonding, Ignition Source Control and Hazardous Area Equipment
- Water Fog and Steam Snuffing for Sulphur Fires and SO2

Day 5: Inspection Walkthrough and the Sulphur Handling and Export Operating Plan

- Case Facility Pit and Degassing Unit Walkthrough Findings
- Case Forming Unit Product Quality and Fines Generation Review
- Shiploader Dust Suppression, Hold Trimming and Draft Survey Checks
- Sulphur Cargo Sampling, Quality Certificate and Shipping Document Pack
- Sulphur Handling and Export Operating Plan Completion

Skills You Will Gain:

- Molten Sulphur Temperature Management
- Residual H2S Testing
- Pit Vapour Space Control
- Granulator and Pastillator Operation
- Formed Product Quality Testing
- Stockpile and Block Management
- Sulphur Dust Ignition Control
- Bulk Carrier Loading Supervision

Why Attend This Course:

- Deliver a Sulphur Handling and Export Operating Plan for a case facility to the operations manager and the terminal superintendent
- Decide when to slow forming rates, divert product to block storage or hold a vessel loading based on residual H2S, fines and dust readings
- Prevent pit vapour fires, H2S exposure, stockpile smouldering and off-grade cargo claims that halt sulphur sales
- Brief pit, forming, yard and berth crews using the plan's checklists, sampling steps and fire response cards

Conclusion:

Back at work, the participant presents the Sulphur Handling and Export Operating Plan to the operations manager, terminal superintendent and HSE lead, who use it to set residual H2S and product quality limits, approve pit sweep, dust collection and fire protection upgrades and fix inspection rounds for the sulphur area. Shift supervisors can adopt its checklists for each shipment. After the first vessel loaded under the plan, the site should review fines content, dust readings, any fire watch events and the cargo certificate against the plan.

Frequently Asked Questions FAQ:

What should participants know before a sulphur handling course on degassing, forming and ship loading?

Participants should already work with molten or solid sulphur in a gas plant, refinery or export terminal and read plant layouts. Bringing pit inspection notes, forming unit records or vessel loading reports helps them apply the walkthrough day to their own site.

How does sulphur handling differ from a sulphur recovery unit or acid plant course?

Sulphur handling starts where recovery units end: it degasses, transfers, forms, stores and ships the elemental sulphur product. Recovery unit courses make sulphur from H2S, and acid plant courses burn sulphur into acid, so neither covers forming, stockpiles or export loading.

Why must liquid sulphur be degassed before sulphur handling and storage?

Liquid sulphur holds dissolved H2S and polysulfanes that release gas as it cools and moves. Without degassing, H2S collects in pit, tank and vessel vapour space, where it can reach toxic and flammable levels and expose loading crews.

What do participants take back from the sulphur handling course?

Participants take back a Sulphur Handling and Export Operating Plan built on case walkthrough findings, with residual H2S and product quality limits, storage rules, dust and fire controls and a shipment checklist they can adapt to their own facility.