

Take 5 for Safety

Excellence in Safety
Pictures of the Week

Collider-Accelerator Department
4-24-12



Excellence in Safety

- Companies with excellent safety records have three safety practices in common, which are
 - Management commitment to safety as an overarching business objective
 - Line management accountability and responsibility for safety
 - Workforce involvement in safety
- Three safety elements are also found in companies with excellent safety records:
 - A competent group of safety specialists
 - Clear rules and procedures
 - Comprehensive safety systems

Excellence in Safety

- The priority given to safety is considered the most-important controller of injury performance
- Unless such priority is given to safety, it drops to a lower value in the face of pressure for less maintenance and more operations, and these management actions communicate the lowering of safety priority directly to workers
- If the workers see managers taking risks, then the workers will take risks too

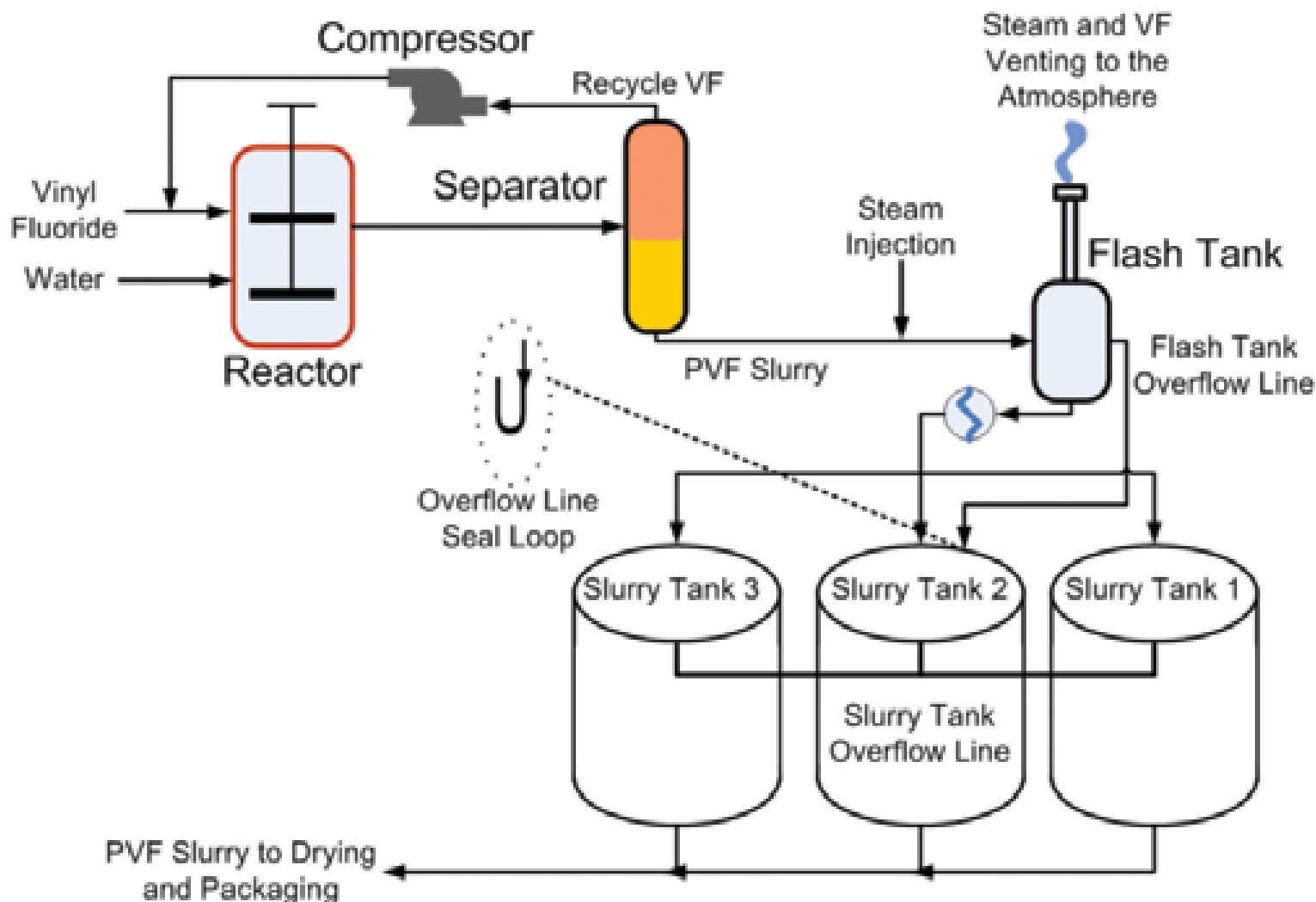
Pictures of the Week Fatal Explosion at DuPont Plant in NY October 2010



Welding on Tank Containing Vinyl Fluoride (VF) Vapor



VF Process Flow Diagram



Accepting Risk from Management on Down

- DuPont managers decided to weld on a tank while the VF process was operating after they successfully welded on an adjacent tank during shutdown
- DuPont engineers assumed flammable VF vapor could not pass directly between tanks through the overflow line
- DuPont engineers assumed that VF vapor in the process could not reach flammable levels in the slurry tanks
- DuPont managers re-started the process after incorrectly concluding that a defective seal loop did not increase the risk of VF vapor transfer
- DuPont work planners did not require testing the atmosphere inside the tank for flammable vapor even though the work required welding directly to the tank top
- The workers (sub-contractors) who signed off on the welding permit were not knowledgeable in the operations and hazards of the VF process
- OSHA does not require gas monitoring inside containers that are being welded even though it is recommended by industry safe practice guidelines