

E. I. DuPont De Nemours Co. Fatal Hot Work Explosion Case Study

- Brief summary of what happened in this incident
 - The incident took place on November 9, 2010, at an E.I duPont de Nemours and Co. Inc.
 - A contract worker was performing maintenance work on a tank that had flammable vinyl fluoride gas contained in it
 - The heat from the welding spark ignited the vinyl fluoride gas which caused the explosion.
 - One of the workers died instantly from blunt force trauma and the other received first-degree burns and minor injuries.

- What are the systems and subsystems in this example?
 - Systems:
 - Tedlar process
 - Management of Change
 - Subsystems:
 - Separator
 - Flash Tank
 - Reactor
 - Slurry Tank
 - Work Permit system
 - Gas monitoring system
 - Shutdown/startup procedure
 - Lockout procedure

- What would your team have done differently to prevent the incident?
 - Regularly check the gas concentration of the tank and know the proper protocol when the concentration of the tank exceeds a certain psi.
 - Inform contractors about site-specific hazards including the presence of an inflammable material.
 - Never assume that the process is safe unless checked.
 - Have the appropriate personnel sign work permits