

Condensate Explosion

EPSC Learning Sheet , September 2017



What Happened:

On the roof of a water / natural gas condensate tank at a gas production site, welding work was done. A handle of a valve was moved out of the way, that opened it. LPG flowed through the valve to the hot spot and exploded. Two workers died.



Aspects:

- “Condensate” is not water: in Oil & Gas exploration it refers to LPG that can ignite and explode when mixed with air. The contractors doing the work were unaware of this
- The hot work was not well isolated from the gases in the tank (e.g. by LOTO or a spade): a valve could be opened that allowed LPG from the tank to flow to the hot pipe and ignite
- The welding was added later to an existing permit to work, that was not recognized as high risk work afterwards
- No good discussion took place on the work hazards between permit issuer and contractor
- The tank was not made free from the hazardous LPG
- The workers felt safe as safety was important on the site

Hot work in zoned areas is dangerous