

Explosion while hydrotesting a tank



EPSC Learning Sheet September 2024

What Happened:

An explosion occurred in a storage tank, during hydrotesting. Two operators that were working on the tank were injured.



Aspects:

- Hydrotesting of a tank is done with water to validate tank integrity: strong and leak free. Here the water was polluted with a flammable liquid that came from the pipelines. It formed an explosive mixture in the tank that was ignited.
- Remove people away from equipment when doing integrity testing. It is potentially dangerous when equipment fails.
- When using hydrocarbon lines to transfer water, they need to be flushed first and proven to be clean.
- This is an Ex zone. The workers might have caused the ignition.
- Equipment integrity testing requires a specific plan, based on a hazard analysis.

Equipment integrity testing needs specific attention