

Hot Work with a Propane Flash Fire



EPSC Learning Sheet May 2021

EPSC

What Happened:

The discharge pipeline of a propane compressor had a leak. During the complex repair using cutting tools to open a corroded flange, propane was released and a flash fire injured the mechanic.

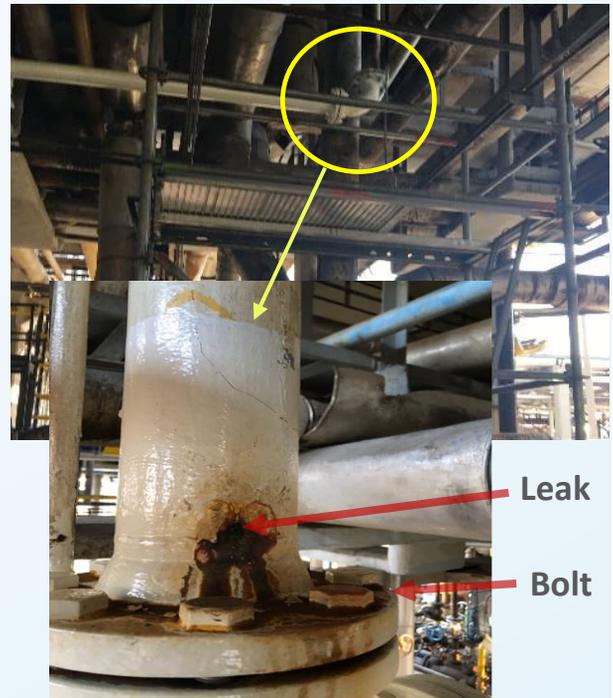
Relevant Process Safety Fundamentals



First Line Break



Stay out of the line of fire



Aspects:

- Apply first line break principles: assure that equipment is isolated, de-energized and free of chemicals, before opening.
- Opening equipment that contained hydrocarbons using cutting equipment, requires intense preparation.
- Validate that isolation plans are complete: leaking valves can reintroduce hazardous materials, as happened here.
- Mechanics are advised to first cut or open the bolts on the other side of the pipe to stay out of the line of fire (chemical spray).
- If remaining chemicals can form a hazard, PPE like face shield and fire-resistant clothing, as well as easy escape routes to emergency shower are essential to protect workers.

First line break is a hazardous operation