Visbreaker Fire

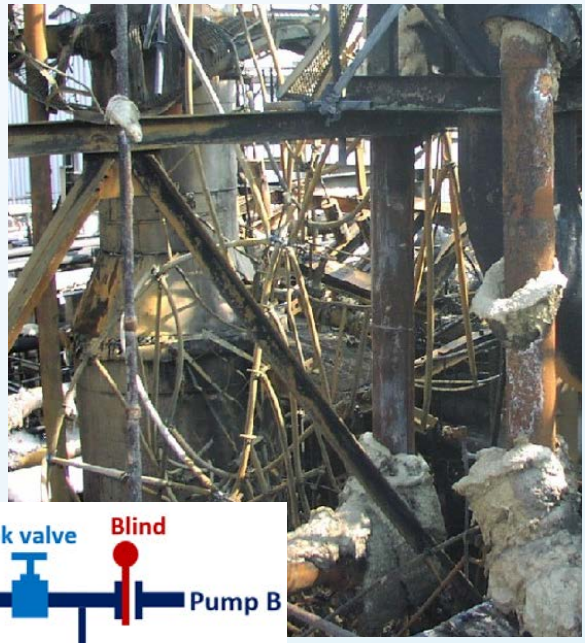
EPSC Learning Sheet October 2022

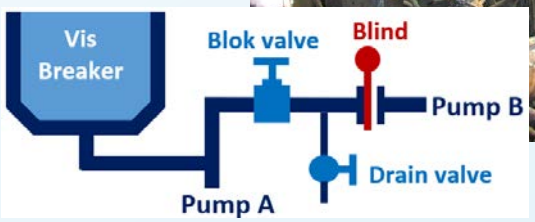
EPSC

What Happened:

Reconnecting the B bottom pump of a visbreaker distillation column, resulted in a hot hydrocarbon release and fire.

The work took place behind a single valve that was not fully closed and released a sludge plug when the blind to the pump was unbolted.





Aspects:

- The single valve to the process was not well closed and blocked by heavy residual material. This is a typical hazard of valves in heavy hydrocarbon services.
- Before opening such systems clean them well and try to flush heavy residuals away with lighter solvents.
- Opening of the drain line (between suction valve and blind) did not reveal that the valve was not entirely closed. Validate that drain valves and lines are fully open and unplugged. Also tubing to pressure sensors can be blocked.
- The release could not be stopped by the emergency valve to the column as cables to the valve were already burned. A fail close valve or fire protection could have helped.

Working behind a single valve is a hazardous operation that requires additional measures